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Title:
Accounting system installation

Place:
Scranton

Date:
[1934]

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Accounting system installation, by ... Clarence Van Sickle ... Scranton, International textbook company [c1934]
iv, 195 p. 23½cm.

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International Correspondence Schools
Scranton, Pa.

Accounting System Installation

By
PROFESSOR CLARENCE VAN SICKLE, M. A.
UNIVERSITY OF PITTSBURGH

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Accounting System Installation

BY

PROFESSOR CLARENCE VAN SICKLE, M. A.
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INSTRUCTIONS FOR STUDENTS

The section on Accounting System Installation contains five lessons, each consisting of from two to four chapters, as shown in the Outline of Lessons on the preceding page. On reading the text you will find that at the end of each chapter questions are given to which answers are to be prepared by you. Your work is to be retained until all the chapters contained in a lesson have been read and answers to the questions at the end of each have been prepared. Then, inspect your work carefully and send answers for examination. Continue with the study of the next lesson. The completion of this text requires the mailing of five sets of answers.

In studying, read a few pages at a time, if possible an entire chapter. Never skip from one part of a lesson to another. If you fail to understand a statement, pass over it temporarily, continuing your reading until the chapter is finished. Then read the chapter again and study thoroughly the questions given at the end. If the point is still obscure write us for assistance. Information blanks and addressed envelopes are provided for this purpose. Remember that although you benefit most when you solve your difficulties yourself, too much time should not be spent in attempting to understand one point. Do not be in a hurry to put down your answers. Usually, it is best to prepare your work in rough form before it is completed in final form. The appearance and legibility of your work is important. Take pains with your writing and figures. All work should be done in ink.

Detailed information regarding studying, preparing answers to problems, sending in your work, etc., is given in the pamphlet How to Proceed with Your Studies.

ACCOUNTING SYSTEM INSTALLATION

CHAPTER I

SYSTEM INSTALLATION FOR BUSINESS ENTERPRISES

1. Meaning of Accounting System.—An accounting system is an orderly plan devised to record business transactions in a methodical manner; it includes, also, statements and statistical reports prepared from the records. A business transaction is an exchange of equivalent values recorded in terms of dollars and cents. The system must provide for the necessary original records which become the bases for listing and summarizing the business transactions. From the original records which are usually of a temporary nature, there must be provided a permanent chronological record of the transactions in books which are called journals. The transactions are then transferred or posted from the journals to the ledgers, where they are recorded chronologically in an orderly classification of accounts. The postings are made to both the general ledger and to such subsidiary ledgers as are needed. A trial balance is prepared from the general ledger for two principal reasons. First, obtaining a balanced trial balance tests the mathematical accuracy of the ledger operations of posting and account balancing. Second, the summarized account balances in the trial balance are used in the preparation of the various accounting statements. Along with the trial balance, subsidiary ledger proofs are also prepared. The statements prepared at the end of each month include the profit and loss statement, the balance sheet and the statement of capital or surplus. A statement of manufacturing cost is also prepared in the case of a manufacturing enterprise. In addition to financial and operating statements, many diverse types of statistical reports are prepared for different executives.

An accounting system, then, is a comprehensive plan for the recording of the detailed business transactions from the time they originate until they are presented in the condensed form of statements and reports. An accounting system, however, is more than a system for recording data pertaining to business transactions which are presented in statements and statistical reports.

Interwoven through the process of recording the transactions must be incorporated certain safeguards covering the assets of the enterprise. These safeguards are known as internal checks. This phase of an accounting system is second in importance only to the recording of transactions. In fact, an accounting system is of little value unless it provides for a complete scheme of internal checks.

2. Meaning of System Installation.—System installation implies system building. The latter includes the study of the conditions within the business enterprise for which accounting records must be prepared. In the process of the study of the business unit, the need for various internal checks must be con-

sidered. The accountant or auditor engaged in making the study must consider, in addition to his own viewpoints and impressions, the wishes and desires of the company's own personnel insofar as they can be incorporated in keeping with good system-building practice. After the elements of the system have been studied, collected, assembled, inspected, tested, and approved, the system is then said to have been built or designed and is ready for installation.

The installation of an accounting system is the placing into use of the various records, journals, and ledgers, together with the instructing of the company employes as to their use and importance, and in the method of statement preparation. The company employes should be made acquainted with their own duties in connection with the records, books and statements, for which they are responsible. It is equally important to acquaint the employes with the interrelationship existing between the records and books upon which they work and the other records in the accounting system which are affected by their work.

3. Necessity for Use of Accounting Systems.—A business may be organized and operations may be commenced without the use of any kind of an accounting system. But the business cannot long continue without one. Competition is so keen, gross profit margin is often so small, and the need for detailed knowledge of operating and financial conditions is so essential for efficient business control, that an accounting system is imperative. An efficient and well-organized accounting system is also a safeguard against fraud, conversion, and defalcation.

An organized business, regardless of its type or nature, is kept in operation because it sells commodities or services. In order to sell goods or services, finished goods must be purchased, commodities must be manufactured or services must be rendered. The sale of finished goods or services is, of course, attended by certain selling, administrative, and financial expenses. All of these phases of a going concern create the existence of business transactions. A going concern in the final analysis is kept going only by business transactions. They are the blood stream of the business. Without them there would be no business. The type of business transactions depends upon the nature of the business. The volume of transactions occurring daily and monthly results from the size of the enterprise. The accounting system is developed from an analysis of the transactions.

Inspection of the business transactions of different enterprises will show that a permanent record of transactions is necessary for at least eight reasons. A record of business transactions must be kept for the purpose of:

(*a*) Having a permanent record of the transactions for future reference.
(*b*) Preparing operating and financial statements therefrom.
(*c*) Preparing statistical reports.
(*d*) Setting up budget estimates.
(*e*) Permitting an audit to be made.
(*f*) Retaining records for tax purposes.
(*g*) Complying with legal requirements.
(*h*) Forecasting future business policies.

(*a*) The importance of an accounting system in connection with each of the purposes mentioned in the foregoing list is enlarged upon in the following paragraphs. It is important to have a permanent record of the transactions for future reference for several reasons other than those itemized under (*b*) to (*h*) inclusive in the foregoing list. Permanent records have often proved valuable in court litigation. Adjustments of creditors' and customers' claims require a record of receipts and shipments of materials. Cost estimates for contract bids also are prepared from records that have been retained.

(*b*) It is impossible to prepare operating and financial statements with accuracy if there is no permanent record of all the business transactions. This is attested to by the fact that a balance sheet prepared from books kept by single entry is a financial statement to which little credence can be given. From a set of books kept by single entry, it is impossible to prepare a regular form of profit and loss statement without the use of supplementary records. A double entry accounting system is absolutely imperative if accurate statements are to be prepared. Accurate statements are a vital necessity to the intelligent operation of a business enterprise.

(*c*) Another phase of importance in connection with the necessity for permanent records is the preparation of statistical reports. All the financial details desired by executives cannot be shown conveniently on the balance sheet. From the detailed records, certain financial measurements and ratios can be prepared. Other illustrations of statistical reports prepared as an adjunct to the balance sheet are accounts receivable age analyses, worthless customers' accounts charged off, inventory analyses, appraisal reports, accounts payable age analyses, etc. The profit and loss statement and the manufacturing cost statement cannot show, all of the detail necessary for the adequate and intelligent control that must be exercised by the business executives. Some of the statistical reports applicable to operations which are prepared from permanent records are: analyses of raw materials used; labor distribution by departments, operations, and jobs; overhead expense analyses by departments, products, and nature of items; analyses of plant idleness; sales analyses by commodities, territories, and customers; selling, administrative, and financial expense analyses, as well as many other detailed records used by different individual concerns.

(*d*) The preparation of budget estimates is made possible only by reference to past records. When budgets are first placed into use, one of the principal bases for setting the figures is the records of what the expenses have been in the past. After budget schedules have been established, records of actual expenditures must be compared with the budgeted amounts.

(*e*) Good business management requires that an audit of a concern's accounts be made, at least once a year, by some party external to the business itself. Errors of omission, commission, defalcations, and faulty practices are brought to light by an audit. It is self-evident that there cannot be an audit without the existence of books and records.

(*f*) Since the Federal income tax law became operative in 1913, the importance of records and complete accounting systems has been demonstrated. Every

business enterprise subject to the income tax law is liable to have its books and records inspected at any time by the field auditors of the Federal internal revenue bureau. The existence of a complete accounting system and detailed records kept in good form make possible a speedy check by the Federal tax auditors. A complete accounting system is prima facie evidence of an attempt to keep honest records, and it cannot help but instill confidence in the minds of the tax auditors. It is obvious that any tax on sales or net income payable to a state or Federal government can be computed accurately only from adequate records.

(*g*) Certain types of business enterprises are required by law to maintain an accounting system. The Interstate Commerce Commission prescribes the manner in which the accounting records are to be kept for the railroads of the country. State public service commissions also dictate the manner in which accounts are to be kept for public utilities, such as electric power, gas, water, bus line, and street railway companies. Educational and welfare institutions receiving state aid are required to keep adequate accounting systems in order to account for the appropriations given them, and to enable them to budget their expenditures.

(*h*) An accounting system is needed to assist in forecasting future policies. If a business is to remain alive today, the management must look constantly to the future. The executives of the enterprise must plan the business activities far in advance. Estimating sales, production cost, and operating expenses for a year in advance is not an uncommon practice. In order to make forecasts with some degree of accuracy, the business executives must rely upon past records to a large extent. Other factors such as general business conditions, competition, and the potential buying market must be considered also, but past records are of great importance.

The foregoing explanations show the necessity for accounting systems that will furnish all the data necessary for the preparation of the statements and statistical reports that are required to enable executives to control the business enterprises for which they are responsible.

4. Classification of Business Enterprises.—A classification of business enterprises is shown in Illustration 1, for the purpose of indicating their variety. It should be understood very clearly that the accounting system varies in each different branch of business given in the classification. Not only are there differences in the types of accounting systems for different branches of business, but there is a lack of uniformity in systems of different business concerns within the same industry or business classification. For example, the accounting systems used by the dealers in building supplies are by no means uniform. Difference in the size of business units, and the fact that systems have been installed at different times by different individuals result in a wide variation of systems found in practice. Forms, records, and books used by some concerns often are not used by others.

While the basic business divisions or groups are listed in Illustration 1, only a few examples of individual businesses within the divisions are shown.

When the number of different classifications of enterprises is multiplied by the number of individual concerns within each classification, one can obtain a fairly

CLASSIFICATION OF BUSINESS ENTERPRISES

I. Manufacturing
- *A.* Industrial
  1. Iron and steel products
  2. Wood products
  3. Glass and ceramic products
  4. Machine tools
  5. Textiles
  6. Building materials
  7. Automobiles
  8. Electrical appliances
  9. Oil products
  10. Food products
  11. Rubber products
  12. Office equipment
  13. Chemicals, drugs, and paint
  14. Tobacco
  15. Ice
  16. Household and store equipment
- *B.* Public Utilities
  1. Electric power
  2. Artificial gas
  3. Water plants (pumping and storage)
  4. Steam heat

II. Trading
- *A.* Chain Stores
- *B.* Independent Stores
  1. Food
  2. Clothing
  3. Department stores
  4. Automobiles and accessories
  5. Furniture
  6. Musical
  7. Floral
  8. Drugs
  9. Building supplies
  10. Electrical apparatus
  11. Cleaners, dyers, and laundries
  12. Fuel and ice
  13. Produce merchants
  14. Confectioners
  15. Gasoline and oil distributors
  16. Furriers
  17. Garages
  18. Grain elevators
  19. Beauty shops
  20. Hardware
  21. Moving and hauling
  22. Jewelers
  23. Junk
  24. Landscape gardening
  25. Lumber

III. Natural Resources
- *A.* Mining
  1. Iron
  2. Copper
  3. Silver
  4. Gold
  5. Tin
  6. Zinc
  7. Coal
  8. Clay
- *B.* Drilling
  1. Oil
  2. Sulphur
  3. Water
  4. Gas
- *C.* Quarrying
  1. Stone
- *D.* Dredging
  1. Sand
  2. Gravel
- *E.* Logging
  1. Lumber

IV. Constructing
- *A.* Building
  1. Steel
  2. Concrete
  3. Wood
- *B.* Road
  1. Concrete
  2. Asphalt
  3. Macadam
  4. Brick
- *C.* Bridges
  1. Steel
  2. Concrete
- *D.* Trades
  1. Plumbing
  2. Electrical
  3. Flooring

V. Laboratories
- *A.* Testing
- *B.* Research

VI. Printing
- *A.* Newspapers
- *B.* Book Publishers
- *C.* Magazine
- *D.* Job Printing

VII. Transportation and Communication
- *A.* Transportation
  1. Motor
  2. Steam
  3. Electric
  4. Air
  5. Water
- *B.* Communication
  1. Telephone
  2. Telegraph

VIII. Banking and Finance
- *A.* Commercial Banks
- *B.* Building and Loan Associations
- *C.* Collection Agencies
- *D.* Loan Agencies

IX. Brokerage Houses
- *A.* Securities
- *B.* Real Estate

X. Insurance
- *A.* Fire
- *B.* Life
- *C.* Automobile
- *D.* Public Liability

XI. Moving and Storage

XII. Farming and Dairying
- *A.* Garden Truck
- *B.* General Farming
- *C.* Stock Raising
- *D.* Fruit Growing
- *E.* Nurseries
- *F.* Dairy Products
- *G.* Poultry and Eggs

XIII. Hotels and Clubs

XIV. Lodges and Unions

XV. Amusements
- *A.* Movies and Show Houses
- *B.* Parks
- *C.* Billiards and Bowling

XVI. Educational

XVII. Churches

XVIII. Hospitals, Sanitariums, and Charitable Institutions

XIX. Cemeteries

XX. Professional
- *A.* Physicians and Surgeons
- *B.* Dentists
- *C.* Attorneys
- *D.* Engineers
- *E.* Accountants
- *F.* Undertakers
- *G.* Advertising

XXI. Political Subdivisions
- *A.* Federal Government
- *B.* State Government
- *C.* County Government
- *D.* City, Town, or Village
- *E.* Township

Illustration 1

good idea of the variety of systems that are in use. Uniformity in accounting systems within a given industry, while it would be advantageous, is rarely an actuality. There are exceptions to this statement in certain industries and trades where a concerted effort has been made to establish a uniform accounting system.

Illustration 1, and what has been said about the variety of systems in use, may lead the reader to believe that it will prove a stupendous task to become familiar with system installation. This is not the case, however, for certain well-defined principles may be followed which will permit the installation of an accounting system with greater ease than seems possible at first thought. It will not be presenting a true picture of the field in which the system installation man will find himself, however, unless a comprehensive classification is shown.

5. General Principles Underlying System Building.—The general principles underlying the building of accounting systems for all types of enterprises are as follows:

(*a*) Analyzing the transactions of the business.
(*b*) Establishing proper internal checks covering the transactions.
(*c*) Collecting the transactions on the proper forms or records.
(*d*) Recording in the books the transactions collected on the forms.
(*e*) Designing the accounting statements and statistical reports to be prepared from the recorded transactions.
(*f*) Providing for continuous internal audits and periodical external audits of the accounting system.

The aforesaid principles constitute the six steps in the building of accounting systems and each is next considered briefly in detail.

(*a*) Every business gives rise to a series of business transactions; therefore the first step in building and installing an accounting system is a careful analysis of the daily and monthly business transactions.

(*b*) The second general principle to be kept in mind in system building and installation is to establish the necessary internal checks. The internal checks must be developed in conjunction with the forms designed and the bookkeeping procedure followed. Since this phase of system installation is all-important, a great amount of time must be given to the proper design of the internal checks in a system for any business enterprise.

(*c*) After the transactions are properly analyzed it is necessary to determine the means for collecting them. Various types of forms and records are devised to collect and summarize the data. Original records are forms on which the data are accumulated for further use in the preparation of journal entries. The transactions entered on the forms and records become the basis for entry in the journals and ledgers.

(*d*) The bookkeeping procedure in system building is the method devised to record the transactions in permanent books of account in the most rapid, orderly, and economical manner. From the nature of the transactions, and the forms used

to gather the daily data, the bookkeeping procedure is evolved. The number of journals, registers, and ledgers to be used in the system is thereby determined. The manner of distributing the transactions collected on the forms to the employes who are to record them in the books of account, is another factor to be decided. Still another thing to be considered is the extent to which mechanical appliances and equipment will be used in recording the transactions.

(*e*) The fifth general step underlying system building and installation is determining the statements and statistical reports to be prepared from the recorded transactions. Certain accounting statements are so fundamental that they must always be included in the list of required statements. They are the profit and loss statement, the statement of capital or surplus, and the balance sheet. For industrial organizations, the statement of manufacturing cost is also necessary. For many types of business enterprises other accounting statements also may be prepared, such as the statement accounting for the variation in net profit, and the statement of application and provision of funds and assets. The number and nature of statistical reports to be designed for the accounting system, depend upon the type of business enterprise, and the wishes and desires of the individual plant personnel.

(*f*) The final general principle to be considered in developing an accounting system is the necessity for periodical audits. There are two types of audits to be considered in system building. These are internal audits and external audits. Internal audits are verifications of the records by company employes. External audits are performed by public accountants. While external audits are important in the operation of a business, they are of minor significance in developing a system. Any kind of an accounting system is susceptible to an audit. Where the accounting system is set up in accordance with the best principles of system building, an external audit can be made easily. This fact, of course, reduces the cost of the external audit, and should by no means be overlooked.

The building of an individual system for a business enterprise requires the combination of the six general principles that have been discussed, but in addition, certain specific requirements must also be taken into account. The specific needs of a system are ascertained only by a minute and detailed study of the requirements of the individual business enterprise.

6. Uniform Accounting Systems.—Many commercial and industrial concerns have developed uniform accounting systems through the medium of trade associations. The purpose of the uniform accounting system is primarily to permit the comparison of operating results and financial conditions on a standard basis. The uniform accounting system may be developed within a given industry or trade group by the appointment of a committee to study the accounting needs of the specific group. The committee is generally composed of certain of the controllers, auditors, accountants, and managers of the members of the trade group. Sometimes, instead of a committee of this nature being formed to develop a uniform system, the trade association retains a public accounting firm to devise the system. In both cases the details and problems of the industry are ascertained from representa-

tive members of the trade association. With this information in mind, the principles of system building are employed as previously described. The result is a uniform accounting system, which each member of the trade association installs in its own business, hence the same system is used by all members of the association and the monthly statements are prepared in a uniform style. A copy of the profit and loss statement, and the balance sheet of each member of the association is sent to the general office of the trade association as soon as possible after the end of the month. From the profit and loss statements received from all the members of the association, the figures for each item contained thereon are taken and added together. An average is then computed for each item, such as for sales, cost of sales, selling expenses, etc. The average figures for each of the items in the profit and loss statement are then printed and sent to the members. The same thing is done in connection with the balance sheet items. When the members of the association receive the statements composed of the averages, they can compare their individual figures with the averages on the statements. Important disclosures may be shown by this procedure. The figures of the individual concern may vary widely from the averaged figures. Steps can be taken, then, to remedy any item which deviates unfavorably from the average.

Not all trade associations that have developed uniform accounting systems make use of the collective plan for preparing averaged statements. The uniform accounting system can be developed for the purpose of determining the best method or system for the general conditions found within the given trade or industry. A comprehensive study of the conditions within the group will bring the best methods into use.

Another form of uniform accounting system is found in the public utility field. State public service or public utility commissions prescribe in detail the type of accounting systems to be used by gas, power, and water companies. The interstate Commerce Commission also has developed a classification of accounts used by the railroad companies operating in the United States.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

1. What is meant by an accounting system?

2. Explain the term *system installation*?

3. Enumerate eight reasons for keeping a permanent record of business transactions.

4. State the general principles underlying all accounting systems.

5. What is meant by a uniform accounting system? Of what value are uniform systems in the operation of individual business concerns?

Retain your answers and continue with the study of the next chapter.

CHAPTER II

INTERNAL CHECKS

7. Meaning of Internal Check.—The methods of safeguarding the assets and financial affairs of a business are known as internal checks. More specifically an internal check is a system or plan for double-checking the accuracy of certain figures. The amounts arrived at by one person by a certain procedure should correspond with the amounts ascertained by another person, by the same procedure or by a totally different plan. Internal checks are a component part of an accounting system. The various safeguards are incorporated in the system through the mediums of forms, records, journals, ledgers, control accounts, and specific assignment of certain duties to the clerical force, subordinate executives, or officers.

8. Purpose of Internal Checks.—Internal checks are a vital part of any accounting system because of the protection they afford. There are still in existence many small business units the details of which are supervised by the individual owners, and it is in this group that business failures are most frequent. These failures are often a result of an effort to supervise too great a number of activities. The lack of an adequate accounting system and of knowledge of accounting technique and theory are also causes for many business failures. The owner of a small business, in many cases, might profitably delegate his accounting and office duties to another and devote the time saved to the better arrangement of his merchandise, the improvement of his advertising, and to becoming better acquainted with his customers. Effective internal checks will insure the proper performance of accounting and office duties by another person.

In the larger sole proprietorships and partnerships operated upon modern lines, the owner or owners no longer attempt to supervise all of the intricate details of the accounting and office routine. Clerks are employed to do the work. Properly designed accounting systems with internal checks insure a maximum amount of protection for the cash and other working assets handled by the clerks and accountants.

The greatest need for internal checks exists in the corporate form of business organization. The ownership of a corporation resides in the stockholders. The stockholders of a corporation elect officers and a board of directors to manage the affairs of the concern for them. The officers and directors are legally liable for the safeguarding of the assets of the corporation. One of their duties is to arrange for the installation and operation of a properly designed accounting system, which will, of course, make use of internal checks to safeguard the assets of the corporation. The accounting system must be designed not only to safeguard the corporation assets but to protect the directors as well.

Internal checks also facilitate the making of the annual external audit by the public accountant and reduce the cost of the audit. Most business concerns, that

have a sound system of internal checks incorporated in their accounting system, engage public accountants to make balance sheet audits only. The operation of an accounting system with a sound system of internal checks interwoven in the system is substantial proof that the transactions involved have been properly handled. Of course the public accountant should make test checks of the various phases of accounting transactions covered by the internal checks to satisfy himself that no irregularities have occurred. The balance sheet audit and the use of test checks on the routine details controlled by internal checks avoid the necessity for a detailed audit by the public accountant.

9. Types of Internal Checks.—Internal checks are operated primarily in connection with assets, such as cash, accounts receivable, inventories and securities owned. There are some applications of internal checks made to items not classified as assets, for example, accounts payable, payrolls, expenses, capital stock certificates and dividends. In the case of each of the non-asset items mentioned, however, there is a close relationship to some asset item. The relationships are as follows: purchase vouchers, and therefore accounts payable, are related to the payment of cash; payrolls are connected with vouchers and cash payments; expenses are subject to examination and vouchering before payment is made; capital stock cerificates issued are connected with the receipt of cash; and dividends are paid with the disbursement of cash.

In designing an accounting system the proper internal checks must be incorporated in the system so as to cover all the assets and other items mentioned in the preceding paragraph. If the internal checks are not properly established, there will be a lack of adequate accounting control. Without the proper accounting control, the business concern will have its working assets protected only by the integrity of its employes.

A classification of the items for which internal checks are developed, together with the departments affected by them, is shown in Illustration 2.

It should be noted that each different internal check affects two or more departments. This also implies that two or more individuals are parties to the operation of the internal check. While these conditions are not always in effect in every accounting system in existence, they should be placed in effect whenever a new accounting system is designed. The manner or method used in establishing the various internal checks in system building will next be developed. Obviously, it is impossible to describe every type of internal check for each type of item, therefore the internal checks illustrated in the following paragraphs are general in nature. If the general principles are clearly understood, however, it is not a difficult matter to adapt them to any given set of conditions.

10. Establishing Internal Checks for Inventories.—Adequate internal checks should be provided for all types of inventories, because of the monetary value tied up in goods, merchandise, supplies, materials and work in process. Too often the fact is lost sight of that inventories are practically synonymous with cash. An inventory of any type is an investment of cash. The feeling of the employe toward company inventories is often that there is a plentiful supply of everything

CLASSIFICATION OF INTERNAL CHECKS

I. Inventories

Non-Industrial Concerns:

A. Merchandise and Supplies
1. Purchasing
2. Selling
3. Receiving
4. Accounting (Accounts Payable)

Industrial Concerns:

B. Raw Materials and Supplies
1. Stores
2. Purchasing
3. Accounting (Accounts Payable)
4. Manufacturing

C. Work In Process
1. Manufacturing
2. Cost

D. Finished Goods
1. Manufacturing
2. Cost
3. Selling

E. Branch House
1. Purchasing
2. Receiving
3. Selling

II. Expenses

A. Manufacturing Overhead Expenses
1. Manufacturing
   a. Service
   b. Producing
2. Accounting (Accounts Payable)

B. Selling Expenses
1. Selling
2. Accounting (Accounts Payable)

C. Administrative Expenses
1. Administrative
2. Accounting (Accounts Payable)

D. Financial and Other Expenses
1. Credit
2. Treasury
3. Accounting (Accounts Payable)

E. Branch House Expenses
1. Branch House Office
2. Accounting (Accounts Payable)

III. Payrolls

A. Factory
1. Timekeeping
2. Manufacturing
3. Payroll
4. Accounting (Accounts Payable)

B. Office
1. Selling
2. Administrative
3. Financial
4. Payroll
5. Accounting (Accounts Payable)

C. Branch House
1. Administrative
2. Branch House
3. Payroll
4. Accounting (Accounts Payable)

IV. Cash

A. Receipts
1. Selling
2. Treasury or Cashier
3. Accounting (Accounts Receivable)

B. Disbursements
1. Accounting (Voucher Division, Accounts Payable)
2. Accounting (Disbursements Division, Accounts Payable)

C. Petty Cash
1. Selling, Administrative, Treasury, or Branch House
2. Accounting (Voucher Division, Accounts Payable)
3. Accounting (Disbursements Division, Accounts Payable)

D. Branch House
1. Branch House
2. Accounting (Voucher Division, Accounts Payable)
3. Accounting (Disbursements Division, Accounts Payable)

E. Cash Reconcilement
1. Company Auditor or Controller
2. Treasury, Cashier or Bookkeeper

V. Accounts Receivable

A. Trade Customers
1. Selling
2. Accounting (Accounts Receivable)
3. Treasury or Cashier

B. Company Employes
1. Selling
2. Accounting (Accounts Receivable)
3. Treasury or Cashier

C. Branch House
1. Selling
2. Branch House
3. Treasury or Cashier

VI. Notes Receivable

1. Treasury
2. Accounting (Accounts Receivable)

VII. Securities Owned

1. Administrative
2. Accounting (Accounts Payable)
3. Treasury

VIII. Capital Stock Certificates

1. Treasury
2. Administrative

Illustration 2

in the storeroom, that the company is financially better off than he, and that anything that he needs will never be missed if he takes it. Hundreds of thousands of dollars are lost by business concerns every year as a result of this thought existing in the minds of employes. Certainly this condition warrants the installation of an adequate internal check to eliminate or greatly reduce such losses.

In each of the following sections where the various types of internal checks are described, reference will be made to the classification of internal checks appearing in Illustration 2. This reference will make for greater ease in referring to the description of any specific type of internal check.

11. Merchandise and Supplies Inventory Internal Check for Non-Industrial Concerns.—The internal check established for merchandise inventories and miscellaneous supplies for non-industrial enterprises varies in accordance with the size and type of business concern. The general principles are as follows:

1. *Purchasing Department Procedure.*
   - *a.* Where the business is too small to have a purchasing department.
     - *1′.* The owner or manager personally orders or approves the purchase orders for the merchandise to be purchased.
     - *a′.* If he is thoroughly familiar with the stock of merchandise on hand, no other information need be furnished as authority for placing the purchase order. (Illustration 22).
     - *b′.* If he is not closely in touch with the stock of merchandise on hand, he should require proof for the necessity to order.
       - *1″.* A list may be prepared by a clerk and given to him, which should be checked against the merchandise on the shelves or in storage.
       - *a″.* The owner or manager then approves the purchase order. (Illustration 22).
       - *2″.* A merchandise ledger may be kept as a subsidiary record controlled by the merchandise inventory control account. If the ledger is posted up to date, it will disclose the quantity of each item of merchandise on hand and the necessity for ordering same.
       - *a″.* The owner or manager then approves the purchase order.
   - *b.* Where the business is large enough to have a purchasing department.
     - *1′.* The purchasing department places the order for merchandise upon receiving a properly prepared purchase requisition (Illustration 24) from the departmental manager.
     - *a′.* The purchasing agent usually sends out requests for price quotations (Illustration 21) on the merchandise wanted before placing the order.
       - *1″.* Upon determining what company quoted the lowest price on the quality of merchandise wanted, the purchasing agent places the purchase order. (Illustration 22).

The fundamental principle to remember in connection with the merchandise inventory internal check for the purchasing department, is that nothing should be ordered unless its purchase is authorized by the proper authority.

2. *Selling Department Procedure.*

   a. Where the business is too small to have inventory clerks, or to be departmentalized with a manager or buyer for each department, or to maintain perpetual inventory records.

      1′. Under the above circumstances, the need for the merchandise to be ordered must be verified by the owner or manager of the business who is closely in touch with the merchandise needs.

      a′. He will approve the purchase order (Illustration 22) which is sent to the vendor.

   b. Where the business is large enough to have inventory clerks, or is departmentalized with a manager or buyer at the head of each department.

      1′. Inventory clerks are charged with the responsibility of keeping the perpetual inventory stock cards (Illustration 92) posted up to date. The minimum points on each card disclose when the card record should be sent to the order department so that the merchandise item can be ordered. The merchandise stock cards which indicate the necessity for ordering should be checked against the purchase requisition (Illustration 24) by the store manager or other person in charge of merchandise stock control.

      2′. Buyers for large department stores or specialty shops are the individuals who specify the merchandise to be ordered for the specific department over which they have control. They have authority for buying merchandise at points distant from the city in which their company's store is located. To qualify as a buyer, one should possess the following qualities: honesty; knowledge of merchandise; familiarity with market demands; and shrewdness in buying. After the purchases have been made, a purchase order (Illustration 22) confirming same is sent to the vendor.

   c. A perpetual inventory record in the form of merchandise stock card (Illustration 92) is one of the surest safeguards for maintaining an effective internal check over merchandise inventories. The quantity ordered on the purchase order is entered on the stock cards by a clerk. The quantity received is entered by another clerk from the record shown on the receiving list (Illustration 25). The quantity sold or used is entered on the stock cards by still another clerk from the sales slips or salesman's orders (Illustrations 32, 33, 34, 35) or from stores requisitions (Illustration 27). From the ordered, received, and issued columns of the stock record posted up to date, the balance appears which represents the quantity on hand.

The important thing to keep in mind regarding an internal check within the selling department pertaining to merchandise inventory is that there should be a

record of the quantity on hand before any merchandise item is ordered, and that nothing should be ordered unless it is needed.

3. *Receiving Department Procedure.*

   a. Where the business is too small to have perpetual inventory records.

      1′. A receiving list (Illustration 25) should be made whether or not a perpetual inventory system is in operation. Each receiving list should be checked against the purchase order (Illustration 22), and a notation made on the latter as to the date and quantity received. The receiving clerk should not be permitted to see the purchase requisition or purchase order records. Access to either of these records affords him the opportunity of listing the quantity ordered rather than the quantity actually received, which may differ owing to mistakes of the vendor.

   b. Where the business is large enough to have a perpetual inventory record.

      1′. Each receiving list (Illustration 25) is checked against the perpetual inventory stock record (Illustration 92) and a notation is made on the latter, showing the date, order number and quantity.

The principal feature to be kept in mind in connection with an internal check within the receiving department is that the receiving clerk should not have access to the purchase requisition or purchase-order records. Each item of merchandise should be counted, weighed, or measured to insure the payment for only the quantity received.

4. *Accounting (Accounts Payable) Department Procedure.*

   a. Where the business does not make use of a voucher system.

      1′. After the receiving list has been checked against the merchandise stock record it is sent to the accounts payable division of the accounting department where it is compared with the vendor's invoice. Before the vendor's invoice is sent to the accounts payable department for comparison with the receiving list, the purchasing agent should approve the price thereon as the quoted price. The invoice amount should be verified also by proving the extensions and totals. This latter procedure should be done by a clerk in the office of either the purchasing agent or the accounting department. If the two records are in agreement, the invoice is entered in the purchases journal, and then is placed in a tickler file, under the proper date for future payment. If there is any difference between the quantity received and the quantity invoiced, the invoice payment is usually held up until an adjustment is made by the vendor.

   b. Where the business operates a voucher system.

      1′. If no discrepancy exists between the receiving list record and the vendor's invoice, the invoice is approved for payment. A voucher [Illustration 62 and 62 (*a*)] is prepared and the invoice attached

thereto. The voucher is entered in the voucher register and then placed in the tickler file for future payment.

The chief factor to remember in relation to an internal check within the accounting (accounts payable) department is that no invoice should be approved for payment without first making sure that the merchandise has been actually received in good condition.

In general, the internal check built up to safeguard merchandise and supplies inventories for non-industrial organizations is for the purpose of assuring the owner or management of a business that the merchandise was ordered for company use only, that it was not ordered until necessary, that the exact quantity invoiced was actually received, that the invoice value was in accordance with the vendors quoted price, and that the invoice computations were verified and found to be the exact amount for which payment is to be made.

12. Raw Materials and Supplies Inventory Internal Check for Industrial Concerns.—The internal check designed to maintain control over the raw materials and supplies of an industrial organization is in many ways identical with the internal check set up for merchandise inventories. The chief differences to be noticed are in connection with the phases of internal check assigned to the stores and manufacturing departments. The general principles of internal check for raw materials and supplies inventory in an industrial organization are next outlined.

1. Stores Department Procedure.

a. The storekeeper is charged with the responsibility for safeguarding the inventory of raw materials and supplies. This includes the establishing of the necessary means of physical control over the raw materials and supplies in addition to the accounting control. All stores items should be protected so that nothing is permitted to leave the storeroom except in exchange for a stores requisition (Illustration 27) for the raw materials and supplies. The storekeeper is also supposed to maintain the proper quantities of the various items carried in the storeroom at all times. To insure the existence of an adequate stock of raw materials and supplies on hand at all times, to prevent overstocking, and to safeguard the stores inventory, the following procedure is recommended:

b. A stores ledger record (Illustration 94) is kept for each item stocked in the storeroom. The record for each stores item provides space for listing the maximum quantity and minimum quantity. The stores ledger also contains space for information as to quantity ordered, order number, quantity received, quantity issued, and balance on hand.

1′. Machinery is set in motion for ordering materials and supplies when the balance on hand, of any stores item, reaches the minimum point.

a′. Each day as postings for store issues are made, the stores ledger posting clerk pulls from the card file the stores ledger cards that show minimum quantities on hand.

b′. An actual count of the store items to be ordered may be made and compared with the quantity shown on the perpetual-inventory stores-ledger record before the purchase requisition is signed.

1″. This procedure insures that no materials or supplies are ordered until the minimum point has been reached.

c. A purchase requisition (Illustration 24) is made out from the stores ledger records.

1′. The quantity of each item ordered is usually approved by the storekeeper who is familiar with the average monthly consumption of each stores item.

2′. The ordering of special equipment, apparatus, materials, and supplies, by departmental heads and executives, not regularly carried in stock, is often cleared through the storeroom after being approved by the proper executive.

a′. The purchase requisition is then sent to the purchasing agent.

d. A receiving list (Illustration 25) is prepared in triplicate by the receiving clerk, an employe of the stores department, for stores items received from the vendor. One copy goes to the stores ledger clerk, a second copy is sent to either the auditing or accounts payable department, while the third copy is retained by the receiving clerk. Scrap materials recovered (Illustration 28) and salvaged materials reclaimed (Illustration 29) from the shop, and turned into the storeroom, are also recorded by the receiving clerk.

1′. The receiving clerk places the stores items in their proper bins within the storeroom after preparing the receiving list.

2′. A copy of the receiving list is sent to the stores ledger clerk who makes a transcript of the quantity, order number, and in some systems the price and value of the store item on the stores ledger cards affected by the stores items received.

3′. Another copy of the receiving list is sent to the auditing department or to the accounts payable department, where it is compared with the vendor's invoice.

e. A stores requisition is the form prepared by the foreman or planning department for raw materials or supplies needed in the manufacturing departments. To form one of the links in the internal check established for the stores inventory, the stores requisition must show the following information.

1′. The account name or number, department name or number, and job order number affected by the withdrawal of the raw materials or supplies.

2′. The quantity of material issued.

3′. The stores item name and classification symbol.

4'. The name of the individual authorized to withdraw the raw materials and supplies from the storeroom.

5'. The unit price of the stores item, and the total cost of the raw materials withdrawn from the storeroom.

The important principles to remember in connection with the internal check established to control the raw materials and supplies inventory within the stores department are:

(*1*) To make storekeeper responsible for raw material inventory investment.

(*2*) To have a perpetual inventory record of every item carried in stock in the storeroom.

(*3*) To make sure that nothing but regular stock items are ordered unless authority to order something special, such as equipment or special tools, is given by some major executive.

(*4*) To see that all purchase requisitions are placed with the purchasing agent in a uniform manner.

(*5*) To have the raw materials and supplies received itemized very carefully, by store item name and quantity, in order that no invoices may be paid unless there is a record that the materials were ordered and received in accordance with the order.

(*6*) To issue nothing from the storeroom unless a stores requisition is received in exchange for the raw materials and supplies.

(*7*) To price accurately each store item issued on the stores requisition, and to make the extension of the quantity issued multiplied by the price, with the utmost accuracy.

2. Purchasing Department Procedure.

a. The purchasing agent who has the responsibility of ordering the stores items usually places the order for the quantity specified on the purchase requisition. If the quantity seems to be excessive, he frequently has the authority to challenge the storekeeper's purchase requisition. This is an internal-check factor not to be overlooked.

b. The purchasing agent sends out requests for price quotations (Illustration 21) to various supply companies or vendors for the stores items listed on the storekeeper's purchase requisition.

c. Upon the receipt of price quotations (Illustration 21) from the vendors, the purchasing agent should place the purchase order (Illustration 22) for the stores items with the lowest bidder, if it can be assumed that a uniform quality of goods is offered by each bidder.

d. The office of the purchasing agent verifies the prices shown on the invoices of the vendors by comparing the invoices with the vendors' price quotations received prior to placing the purchase orders.

The main features of an internal check relating to the purchase of raw materials and supplies is that nothing should be ordered unless a purchase requisition has been prepared in accordance with the proper principles. The purchase order should be sent to the vendor quoting the lowest price on the proper quality of materials.

3. Accounting (Accounts Payable) Department Procedure.

a. Where a voucher system is in use, if there is complete agreement between the receiving list and the vendor's invoice, a voucher [Illustration 62 and 62 (*a*)] is prepared as authority for payment of the invoice. The voucher is entered in the voucher register and then placed in the unpaid file to await the payment date.

The internal check feature, applicable to the accounting (accounts payable) department, pertaining to the raw materials and supplies inventory is that no invoice should be approved for payment until there is perfect assurance that the materials ordered were for company use, that they were actually received in good condition in accordance with the invoice, and that the price quoted on the vendor's invoice is in agreement with the price quotation.

4. Manufacturing Department Procedure.

a. The internal check principle attached to the raw materials and supplies inventory within the manufacturing department is in connection with the requisitioning of the materials for use in the shop. The following factors should be given close attention to establish safeguards over the raw materials inventory:

1'. Give only the most trusted individuals the authority to sign stores requisitions for materials and supplies withdrawn from the storeroom.

a'. This will prevent or reduce to a minimum the withdrawal of materials for any purpose other than company use.

2'. Insist that no materials be taken from the storeroom for company use without a stores requisition being given in exchange.

3'. Demand that stores requisitions be prepared with accuracy.

A summary statement setting forth the principal features of an internal check designed to safeguard the raw materials and supplies inventory is that it should embody the factors of accurate storekeeping, proper purchasing, adequate verification of details preceding invoice payment, and the best principles of withdrawing stores for use in production.

13. Work In Process Inventory Internal Check.—An internal check planned to establish control over the inventory of work in process presents new problems. The problems of accounting control are usually as important as the problems of physical control in connection with this inventory. The general principles of control for the work in process perpetual inventory account are next outlined.

1. *Manufacturing Department Procedure.*

   a. The stores requisitions (Illustration 27) are prepared by the shop foremen or the planning department for the raw materials and supplies charged to the Work In Process Inventory account.

      1′. The quantity of raw materials needed is ascertained from sources, such as:

      a′. Planning Department.

      b′. Engineering Department.

      c′. Administrative Department.

      2′. The raw material specifications are usually shown on a bill of materials. The bill of materials is an itemized list of the different items of material required to complete an order.

      3′. The stores requisition specifies the quantity, price, and cost for each item of raw material requisitioned for production. The order number is also shown.

   b. The time tickets (Illustration 30), which are the original records for labor, are prepared by the workmen and approved by the foreman of the department wherein the work was performed, preliminary to charging the cost to the Work In Process Inventory account.

      1′. Various types of wage payment plans necessitate different varieties of time tickets.

      2′. The labor operations are classified by name and code number.

      a′. Each labor operation may have a specification for the standard time allowed to perform the operation, as ascertained by the engineering department.

      3′. Each labor operation may have an established standard wage rate which is determined by officials of the administrative and manufacturing departments, and kept on record in the payroll department.

   c. The amount of manufacturing overhead expense to be charged into the Work In Process Inventory account is computed by the cost department.

   d. The combination of the three elements of cost, namely, raw materials, direct labor, and manufacturing overhead expense, results in finished goods.

      1′. At the end of any month there are invariably units of products which are not completely finished.

      a′. It is this semifinished product value for which there must be a control and internal check established.

2. *Cost Department Procedure for Work In Process Inventory.*

   a. The cost department creates the control and internal check for the work in process inventory located in the factory by:

      1′. Computing the raw material cost from the stores requisitions.

      2′. Figuring the direct labor cost from the time tickets.

      3′. Estimating the manufacturing overhead expense cost from the burden rates in use within the plant.

   b. The internal check created for the work in process inventory usually follows one of two types, namely, the process plan or the job order plan.

      1′. In the process plan, the value established for the work in process inventory at the end of each month is ascertained from the Inventory account in the general ledger or in the factory ledger.

      a′. A process-order cost report, in the form of a statistical record, usually serves as an auxiliary record that discloses unit costs of the products manufactured.

      b′. This phase of the internal check, disclosing the unit cost of the finished product, makes it possible for the proper credit to be made to the Work In Process Inventory account.

         1″. Past costs of the same finished product and the individual cost elements comprising the completed product are used to test the accuracy and the efficiency of the manufacturing department to produce the required number of finished units from the given value of the cost elements charged into production.

         b″. The balance in the Work In Process Inventory account at the end of the month represents the value of the partly finished products in the shop.

         1″. Verification of this value is usually by estimate, based upon the percentage of completion of the units at the various stages of production.

      2′. In the job-order plan, the value of the work in process inventory at the end of each month is obtained from the control account in the ledger.

      a′. Job-order cost cards (Illustration 96) are kept posted up to date as the jobs are worked upon.

         1″. A summary of the costs appearing on the job-order cost cards for unfinished jobs should agree with the control account balance.

         2″. This value is verified with the semifinished jobs in the factory.

The principal feature of an internal check for work in process inventories is the computation of costs. The costs of products are analyzed by operations, departments, and cost elements. Such analyses permit the measurement of the cost of products at various stages of completion. The number of the partly finished units multiplied by the cost of the units at their respective stages of completion should agree with or approximate the value in the Work In Process Inventory account. Such a verification as this is not frequently made but it is a means of internal auditing not to be overlooked.

14. Finished Goods Inventory Internal Check.—The internal check for the finished goods inventory in an industrial concern is easier to devise and operate than an internal check for the work in process inventory. The reason lies in the fact that the finished goods inventory is composed of completed units instead of partly finished units in different stages of completion. The principles of an internal check established for a finished goods inventory are as follows:

1. *Manufacturing Department Procedure.*—The first principle of an internal check for the finished goods inventory is ascertained from the production record (Illustration 31). This record shows the quantity of units that have been completed within the shop and transferred to the shipping department or warehouse. This information is furnished by the manufacturing division.

   a. A daily report of finished units transferred to the warehouse or shipping department shows the quantity of finished units charged to the sales division.

2. *Cost Department Procedure for Finished Goods Inventory.*—The second principle of an internal check for the finished goods inventory is the computation of the unit cost of the products manufactured and delivered to the selling division.

   a. The unit cost sheet (Illustration 107) furnishes this information in a process-order cost industry.

   b. The job-order cost card (Illustration 96) gives this information in a job-order industry.

3. *Selling Department Procedure for Finished Goods Inventory.*—The third principle of internal check established for the finished goods inventory ledger is the creation of and the maintenance of the finished goods ledger, which is the same in form as the Merchandise Inventory Ledger (Illustration 91).

   a. The finished goods ledger in a process industry is similar to the raw materials and supplies record. It provides, for each item, a record of the quantity received in stock at the warehouse, the quantity shipped on customers' orders, and the balance on hand.

      1′. This perpetual-inventory book record establishes a control over the finished products in the finished goods warehouse or stock room.

   b. The finished goods ledger may or may not have a set of columns for the production cost price, issuing price, and inventory value.

   c. The Finished Goods Inventory control account is the fourth principle of internal check set up for the finished goods inventory and is used to maintain control over the finished goods inventory subsidiary ledger.

In summarizing the principal phases of internal check for the finished goods inventory, the following items must be remembered:

(1) A finished goods ledger is necessary to keep a detailed record of the quantity of receipts, issues and balance of each item carried in stock.

(2) A record of the cost of production (Illustration 107) is required in order to ascertain the cost price of various items of finished goods in order to determine: (*a*) The cost of sales; (*b*) The finished goods inventory value.

15. Branch House Inventory Internal Check.—The internal check designed to establish control over the inventories of branch houses has some features in common with the merchandise and finished goods inventories control. On the other hand, it has some different principles which require description. The general principles of internal check for branch house inventory control are next described.

1. *Purchasing Department Procedure.*

   a. Where the branch house is permitted to purchase certain stock items, as sometimes is the case, the same general principles apply as described in Art. 11, Section 1. The procedure is as follows:

      1′. A copy of the purchase order is sent to the home office.

      2′. After the stock items have been purchased by the manager of the branch house, a record of their receipt must be prepared and a copy of the receiving list sent to the home office.

      3′. The branch purchasing order usually specifies that the invoices of the vendor be sent direct to the home office.

      a′. At the home office, the receiving list is compared with the vendor's invoice prior to the approval of the invoice for payment by the accounts payable department.

   b. The bulk of the merchandise stocked at a branch warehouse comes from the home factory or warehouse.

      1′. It is the function of the branch manager to order the merchandise items as the occasion necessitates.

      a′. The manager should be guided in this by the use of a perpetual inventory record kept for each merchandise item.

         1″. There should be a branch house inventory ledger sheet (Illustion 91) for each stock item.

         2″. The inventory ledger sheet should show the minimum and maximum points for each item, thus providing for seasonable variations.

         3″. The inventory ledger should provide columns for:

         a″. Order number.

         b″. Quantity ordered.

         c″. Quantity received.

         d″. Quantity issued.

         e″. Balance.

2. *Receiving Department Procedure.*

   a. The branch house perpetual inventory record, usually, is kept in terms of quantity only.

      1′. It is the function of the receiving department to itemize on a receiving list all merchandise shipped in.

      a′. The list is used as a basis for making the record in the merchandise inventory ledger as to the quantity received.

      b′. A copy of the receiving list is also used to compare with the shipping list or invoice (Illustration 36) as to the quantity received.

         1″. The shipping list is one of the principal records used to establish control over the branch house inventory.

3. *Selling Department Procedure.*

   a. All merchandise sold must be accounted for by either a sales ticket (Illustrations 32, 33, 34) or an invoice. The sales ticket or invoice is usually prepared in duplicate.

      1′. One copy is used to record in the merchandise stock ledger the amount of the merchandise issued.

      2′. The other copy is mailed to the home office to serve as:

      a′. A verification of the cash deposited for cash sales by the branch office.

      b′. A record of the goods shipped to customers for which an invoice is to be prepared.

The most important feature of an internal check on a branch inventory is the operation of a perpetual inventory record of the merchandise kept at the branch. The proper merchandise control is maintained through the use of adequate ordering, receiving, and issuing records maintained at the branch office, copies of which may or may not be sent to the home office. A policy of centralized accounting control at the home office would necessitate the sending of all information respecting the inventory to the home office where the branch inventory account would be kept.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

1. What is meant by an internal check?

2. Explain the difference between internal checks and external audits. What is the relationship between the two?

3. Internal checks apply to what general groups of accounts?

4. Why are internal checks required for inventories?

5. Outline the fundamental principles involved in the operation of an internal check for the raw materials and supplies inventory in an industrial organization, after considering the following information:

   (*a*) Average monthly raw materials inventory on hand amounts to $100,000 and includes about 1,900 stock items.

   (*b*) A purchasing agent supervises the purchase of all store items.

   (*c*) A storekeeper manages the storeroom in which all stores items are kept.

Look over your answers to the questions following Chapters I, II and immediately send them for correction. Continue with the study of the next chapter.

CHAPTER III

INTERNAL CHECKS (Continued)

16. Establishing Internal Checks for Expenses.—The creation of an internal check for all types of expenses is as important as having internal checks for inventories. The control of expenses invariably results in expense reduction, and expense reduction means the saving of the asset, cash. It is true that expenses are unavoidable, but expense reduction can be accomplished by setting up the proper controls. With the use of properly prepared budgets, expenses can be curtailed to the point where unnecessary expenditures are eliminated. The use of a budget is not an internal check in the strictest sense of the word, but the importance of establishing budgetary control in an accounting system can not be overlooked. Budgetary control is not so thorough a safeguard in the control of expenses as are certain internal checks. The importance of budgetary control for expenses, however, lies in the fact that, through its operation, various items of expense can be kept within definitely prescribed limits.

The control of expenses is not achieved wholly through the use of budgets. All divisions, departments, and individuals connected with a business concern should have some sort of an internal check established over them to prevent some items of an expense nature from being used for the employes' personal benefit. The expense budget controls, in an impersonal way, the unrestrained use of many expense items such as salaries, wages, power, water, etc.

The budget cannot absolutely control such expense items as tools, supplies, postage, stationery, traveling expenses, etc.; and unless some type of internal check is devised to safeguard such items, many hundreds of dollars will be lost yearly in a large concern. Employes often appropriate, for their own personal use, such items of expense without giving any thought to the effect upon the profit or loss of the company.

17. Manufacturing Overhead Expenses Internal Check.—Internal checks that can be established over certain manufacturing overhead expense items, such as small tools, supplies, and indirect labor, are next described.

1. *Manufacturing Service and Producing Department Procedure.*

   a. Small tools expense.

      1′. All small hand tools such as wrenches, chisels, hammers, bars, drills, pneumatic tools, etc., that are not in constant use by the workmen should be kept in the toolroom. To each workman requiring the use of hand tools is given a certain quantity of metal checks each stamped with the same number. A record of the number on the checks issued to each workman is tabulated in the shop office.

When the workman has an occasion to use a certain hand tool, he states his need to the toolroom attendant. The attendant will then give the workman the tool wanted in exchange for a metal check bearing the employe's number. The check is retained in the toolroom until the workman returns the tool, at which time the check is returned to the workman. If the workman does not return the tool or cannot account for it satisfactorily, the cost of the tool is deducted from his pay check.

      2′. Small tools that are in constant daily use are usually left in the custody of the workman using them. Before the workman obtains a new tool in place of an old one, however, he should be required to turn back the old worn-out one to the storeroom along with a stores requisition for a new tool. The departmental foreman is usually the individual who has the responsibility for approving the stores requisition for a new tool, after he has inspected the worn-out one.

   b. Freight-in expense.

      1′. Freight, express, and parcel post charges on incoming supplies should be charged, where possible, to the account to which the supplies are charged. Copies of the freight or express bills should be attached to invoices for the supplies.

      a′. This procedure charges the inventory for the transportation charges on raw materials and supplies, and prevents a large amount from accumulating in the expense account.

   c. Supplies expense.

      1′. Miscellaneous shop supplies such as brooms, brushes, oil, waste, torches, solder, wire, and innumerable other factory expense items are a part of the raw materials and supplies inventory. Items of this nature should be kept in the storeroom, and be issued only upon a stores requisition authorized by a properly designated individual, generally a foreman. The foreman should be satisfied that the material is actually needed and should show in the stores requisition some job-order number, or departmental expense account number to which the material is to be charged.

   d. Indirect labor expense.

      1′. All workmen classified as indirect laborers should be identified by number, and their presence in the shop performing some specific work should be verified by a time-clock card, a timekeeper, and a foreman as described in Art. 24 of this Chapter.

   e. The expenses incurred by the factory, which require the immediate outlay of cash, must be approved by the superintendent or some other departmental executive. Very few factory expense items come under this classification. Some of the most common examples are the employment of

outside firms to make repairs, water-cooler service, advertising for workmen, power, water, etc.

1'. The approved invoices or expense bills are sent to the accounts payable department.

2. *Accounting (Accounts Payable) Department Procedure.*

a. The invoices and bills for expense items, as approved by the factory executive, are given to the voucher clerk in the accounts payable department for handling as described in Art. 31.

18. Selling Expenses Internal Check.—All selling expenses can be controlled through the medium of the budget. A few items should have a form of internal check established as an extraordinary safeguard. Illustrations of such items are salesmen's salaries, commissions, and traveling expenses, postage, office supplies, telephone and telegraph expenses, subscriptions and dues. The means by which internal controls are established over these items are given in the following sections.

1. *Selling Department Procedure.*

a. Salesmen's Salaries.

1'. The salesmanager should approve the salaries earned by the salesmen before sending the summary of salesmen's daily report (Illustration 40) to the payroll department.

a'. The basis for preparing the salesmen's summary time report is the daily report (Illustration 38) of each salesman. The sales manager can usually judge the accuracy of the salesman's report by reviewing the number of orders obtained, and the number of customers called upon. If the salesman pads these figures, they may not be detected for the time being, but ultimately the facts will be divulged.

b. Salesmen's Commissions.

1'. Commissions earned by salesmen are ascertained from the sales orders (Illustration 35) after the goods have been shipped, or from a duplicate copy of the invoice mailed to the customer.

a'. A reliable clerk in the sales department usually computes the commissions earned by the salesmen, and they are then approved by the sales manager.

c. Traveling Expenses.

1'. This is an item that may be and often is padded. This practice has led many companies to allow a flat rate or maximum amount for expenses each day or week.

2'. If no flat rate is in effect, the sales manager should compare each traveling expense allowance sheet (Illustration 41) with those of preceding weeks. Unusual amounts require an explanation from the salesman.

3'. The traveling-expense allowance sheet is often subjected to further scrutiny by the company auditor, controller or treasurer.

d. Postage Expense.

1'. Postage stamps and stamped envelopes should be kept in possession of the office manager.

a'. All outgoing letters can be given to the mail clerk who applies the postage.

b'. Stamped envelopes cannot be handled so effectively, unless the envelope addressing job is given to one person.

2'. Under the foregoing plans for handling postage some losses may result. But the postage loss will not be nearly so large under these plans, as it would be if every stenographer and clerk had access to the stamps and stamped envelopes.

e. Telephone and Telegraph Expense.

1'. The telephone operator should record all outgoing local calls by departments on an outgoing-call report sheet (Illustration 49). Long-distance calls should be recorded by the name of the party making the call and the point to which the call was made, on a special form (Illustration 50).

a'. The local call sheet should be compared, by the office manager, with the sheets of previous months and preceding years. If an excessive number of calls are made by a department, a satisfactory explanation should be required.

b'. The long-distance call record serves a double purpose.

1''. It makes possible the distribution of the telephone expense by departments or divisions when the telephone company's monthly long distance call record is received.

2''. It shows the amounts to be charged employes for any personal calls made.

2'. Telegraph calls are rarely made by the employes, for their personal use, and seldom need any internal check.

a'. A record of outgoing telegrams (Illustration 51) is very convenient for making a comparison with the monthly bill of the telegraph company in order to make the proper departmental or divisional expense distribution of this item.

f. Subscriptions and Dues Expense.

1'. Subscriptions to trade publications and dues to civic organizations and professional societies are legitimate business expenses, but the amounts should be approved by the sales manager, general manager or controller before a voucher is prepared for them.

2. *Accounting (Accounts Payable) Department Procedure.*
   a. The invoices and bills for expense items approved by the sales manager are sent to the accounting department where vouchers are prepared for them as described in Art. 31.

19. The Administrative Expenses Internal Check.—

1. *Administrative Departmental Procedure.*
   a. What has been mentioned about establishing internal checks and controls over such expenses as postage, telephone, telegraph, dues and subscriptions, for the sales department, likewise applies to similar expenses in the administrative department.
2. *Accounting (Accounts Payable) Department Procedure.*
   a. The invoices and bills for administrative expense items approved by the administrative executive are sent to the accounting department where vouchers are prepared as described in Art. 31.

20. Financial and Other Expenses Internal Check.—In many large business concerns, a special department which may be known as the treasury department is created to control the financial problems of the company. A department of this nature handles all interest, discount, and dividend items, and may supervise the handling of the cash.

Often the management of the financial department is made responsible for supervising the credit extended to customers. Whether the treasury department or the credit manager functioning under the administrative department is responsible for the granting of credit, an internal check must be devised to prevent excessive credit extensions.

1. *Credit Department Procedure.*
   a. Bad Debts Expense.
      1′. The amount of customers' accounts charged off as uncollectible for any given year is usually in proportion to the laxity or cautiousness with which credit is granted.
      2′. The credit manager should act as a check upon the sales manager and sales department.
      a′. All credit sales orders above a specified amount should be approved by the credit manager.
         1″. This requires that the credit manager maintain a close relationship with the accounts receivable department.
      3′. No customers' accounts should be written off until every effort to collect them has been exhausted.
      a′. The accountant in charge of the accounts receivable division should make the actual write-off upon the instructions of the treasurer or similar executive rather than upon information from the sales manager or the credit manager.

2. *Treasury Department Procedure.*
   a. The treasurer or office manager approves the financial expense items such as interest and bank discount, office expenses and supplies.
3. *Accounting (Accounts Payable) Department Procedure.*
   a. The financial expense items as approved by the departmental executives are received by the accounting department. After the approval of the expense items within this department, vouchers are prepared authorizing their payment as described in Art. 31.

21. Branch House Expenses Internal Check.—The internal check created for the purpose of controlling the branch house expenses varies in accordance with the branch house accounting system in effect. If the home office has a decentralized plan of accounting in use, the branch office may pay the expense bills that are incurred. This plan necessitates the creation of an expense fund from which the bills are paid. More often, however, the invoices and bills for expenses incurred by the branch are sent to the home office for payment; under this plan, the following procedure takes place.

1. *Branch House Office Procedure.*
   a. The invoices and bills covering expenses incurred by the branch house are approved by the branch house manager and sent to the home office.
   b. What has been said pertaining to the internal control of certain expense items such as postage, telephone, supplies, etc. for the selling and administrative departments applies with equal force to similar expenses incurred at the branch house.
2. *Accounting (Accounts Payable) Department Procedure.*
   a. The invoices for expense items as approved by the branch house manager are submitted to the accounting department for approval and vouchering as described in Art. 31.

22. Summary of General Principles of Internal Control for Expenses.—The outstanding feature of internal checks established for all classifications of expense items is the intimate knowledge which some minor or departmental executive should possess regarding the details of the expenses incurred. There are not so many interdepartmental relationships existing in internal controls for expenses as in the case of inventories. Interdepartmental verifications are largely displaced by a knowledge of what expenses are legitimate on the part of the heads of the different departments.

23. Establishing Internal Checks for Payrolls.—The internal check created for the payroll is for the purpose of eliminating the practice of payroll padding. The importance of preparing a payroll accurately and honestly lies in the fact that it becomes the basis for the payment of cash. Since cash is paid to the employes on the basis of the payroll record, great care must be exercised to insure its accuracy. The payroll can be only as accurate as the information from which it is prepared.

The roots of the internal check, then, must go back to the preparing of the time tickets and the punching of the time clock cards.

24. Factory Payroll Internal Check.—The internal check for the factory payroll is the most involved of any payroll internal check. This is true for the reason that there are usually many more workmen in the shop than there are in the office. The factory payroll includes the time and earnings of the direct laborers, indirect laborers, and usually the shop clerks. A description of the factory payroll internal check is next developed.

1. *Timekeeping Department Procedure.*
   - *a.* Each shop workman is given an identification number or badge.
     - *1′.* The numbers may be divided into series in order to identify the workman with a particular department in which he works.
     - *2′.* The workman's badge, in addition to identifying him with a particular department, also serves as his identification for admittance to the plant.
     - *3′.* The badge likewise identifies the workman on pay day when he receives his check or money.
     - *4′.* The badge serves to identify the workman when his presence within the factory is checked up during each working day.
   - *b.* At least once during each morning and afternoon, it is the duty of a time clerk to go through the shop and check the presence or absence of each employe. This information is listed in a time book (Illustration 44) opposite the employes name, number and location.
     - *1′.* This procedure is for the purpose of thwarting the possibility of one workman punching the time clock card of an employe who is absent.
     - *2′.* The time-book record is checked against the employe's time ticket, time-clock card, or payroll sheet.
   - *c.* The timekeeping department usually supervises the operation of the time-clock division. The factory time clock should be located at the workmen's entrance to the plant. A watchman should be present to prevent any workman from punching any card other than his own.
     - *1′.* A time-clock card (Illustration 45) usually is made up for each pay period.
     - *a′.* The card contains the workman's name and number.
     - *b′.* Space is provided for listing the time in and out, for both morning and afternoon of each day.
     - *2′.* The purpose of the time-clock card is to show the number of hours the workman is present within the plant each day.
     - *a′.* The total hours spent within the plant by each workman for each pay period, as shown by the time clock card, is used as a verification of the time worked as shown on the daily time tickets for the same period.

     - *3′.* The time-clock cards may be removed from the card rack each day to be checked with the hours worked as shown on the workmen's time tickets of the preceding day, or this check may be performed as a weekly summary or a complete pay period summary.
     - *a′.* Whatever verification method is adopted, there must be an exact agreement between the total hours spent within the plant, as disclosed by the time-clock card of each workman, and the summary of hours worked as shown by his time tickets for the same pay period.
2. *Manufacturing Department Procedure.*
   - *a.* A time ticket (Illustration 30) is prepared daily for each workman. If the workman prepares his own time ticket, it must be approved by the foreman of the department in which the work is performed.
   - *b.* The time ticket prepared in the factory lists the workman's name, number, hours worked on different jobs and labor operations, and the total hours worked.
3. *Payroll Department Procedure.*
   - *a.* The time tickets received from the shop each day are verified with the record of the workman's presence as shown by the timekeeper's time books and with the time-clock cards of the respective workmen.
     - *1′.* If there are no exceptions, the time ticket is passed on to the rate clerk who inserts the hourly, piece-work or standard time rate.
     - *2′.* Another clerk computes the daily earnings.
   - *b.* The time tickets are next sorted by employe identification numbers for purpose of entering the earnings on the payroll.
   - *c.* The payroll sheet (Illustration 47) is then used to enter the daily hours worked or the daily earnings as shown by the time tickets. The cumulative results represent the earnings of the workman for the pay period.
   - *d.* The time tickets are next sent to the cost department to be used for preparing the labor or wage distribution sheet (Illustration 64).
   - *e.* After the payroll sheet has been completed, checked, and approved by the paymaster, it becomes the record from which the workmen's pay envelopes or checks are prepared.
     - *1′.* A copy of the payroll sheet or a notation of the total amount required, after all deductions applicable against the employes are considered, is sent to the accounts payable department.
     - *2′.* If payment is made by cash, a coin and currency analysis sheet (Illustration 46) must be prepared. This form shows the quantity of coins and bills necessary to fill the workmen's pay envelopes.
     - *a′.* Pay envelopes must be made out for each workman, showing the workman's number, name, and earnings due.
     - *3′.* If payment is made by check, a check must be prepared and signed for each workman.

f. After the pay envelopes or checks have been prepared, the paymaster usually superintends the pay-off.

1'. The workman's badge identifies him as eligible to receive the pay.

4. Accounting (Accounts Payable) Department Procedure.

a. The receipt of the evidence as to the amount of the payroll by the accounting department results in the preparation of a voucher.

1'. If the employes are paid by cash, the voucher check is usually drawn in favor of the paymaster, who obtains the cash. Clerks in his office then fill the pay envelopes.

2'. If the workmen are paid by check, the voucher check is usually drawn in favor of the "Payroll Cash" fund.

25. Office Payroll Internal Check.—An internal check for the general office payroll is prepared in the same general manner as for the factory payroll. There are not usually, however, so many internal-check features involved, owing to the smaller number of employes and the difference in the nature of the work performed. Description of the payroll preparation for the sales, administrative, and financial departments is next given.

1. Selling Department Procedure.

a. The sales manager approves the salesmen's daily report (Illustration 38). This is supposed to be proof of the fact that the salesmen have performed the required services.

1'. From the daily reports, a clerk prepares a record of the days worked (Illustration 40) by the different salesmen and sends it to the payroll department after it has been approved by the sales manager.

b. The office manager of the sales department, in similar fashion, approves the record of days worked by the sales clerical force and has it approved by the head of the sales department before it is sent to the payroll department.

2. Administrative Department Procedure.

a. The administrative department office manager approves the records of days worked by the administrative office force, and submits the record to the payroll department.

b. The salaries of the general executives such as the president, vice-presidents, secretary, and treasurer are often placed upon a special payroll.

1'. The paymaster, knowing their salaries, prepares their checks and sends them direct.

3. Financial Department Procedure.

a. The financial department is usually headed by the treasurer. The office manager or cashier under him approves the record of days worked by the clerical force of the department.

4. Payroll Department Procedure.

a. The approved records of days worked, as received by the paymaster, are set up on a payroll sheet, usually by departments, with the monthly salary or hourly rate listed.

1'. If there are any deductions they are listed.

2'. The final total salary is then shown for each party on the payroll sheet.

5. Accounting (Accounts Payable) Department Procedure.

a. A voucher is prepared for the amounts of the office payrolls as transmitted from the payroll department to the accounts payable department, as described in Art. 24, Section 4.

26. Branch House Payroll Internal Check.—The branch house payroll, like the branch house inventory, should be safeguarded in the best possible manner, because of its remoteness from the general office. The best safeguard is an honest branch manager, but the soundest type of internal check should also be in effect. The principles governing the internal check for the branch house payroll are as follows:

1. Administrative Office Procedure.

a. The administrative officer of the home office, in charge of branches, should specify and approve the number of company workers employed at each branch.

1'. An increase in the number of the branch workers should not be permitted without the approval of the home office.

2'. Any decrease in the number of branch house employes should be promptly reported to the home office.

2. Branch Office Procedure.

a. At the end of each pay period, the branch office manager should approve the record of days worked by the employes of his branch.

1'. This record is then sent to the payroll department of the home office.

3. Payroll Department Procedure.

a. Upon the receipt of the record of days worked by the branch house employes, the payroll department prepares the branch house payroll.

b. This payroll is next submitted to the general executive officer in charge of branch houses for his approval.

c. The payroll checks are then prepared.

1'. Payment of branch house employes by check is the safest possible method of preventing payroll padding.

d. The payroll checks are then mailed to the branch office manager for distribution.

1'. At frequent intervals, the paymaster should make a personal trip to the branch house, if possible, and make the pay-off in order to check up on the employes whose names appear on the payroll.

4. Accounting (Accounts Payable) Department Procedure.

a. The amount of the branch payroll as prepared by the payroll department is vouchered for payment as described in Art. 24, Section 4.

27. Summary of Payroll Internal Check Principles.—The fundamental principles to incorporate in an accounting system for safeguarding the preparation of the payroll are:

(*1*) The practice of accuracy and honesty in the preparation of the daily time tickets.

(*2*) The proper supervision over the punching of the time-clock cards.

(*3*) The employment of an efficient timekeeper in the shop.

(*4*) The employment of honest office and branch managers.

(*5*) The utilization of every possible type of cross-checking and verification within the payroll department.

(*6*) The services of a keen-minded and unquestionably honest man serving in the role of paymaster. His alertness will often sense situations that will reveal crooked payroll practices.

QUESTIONS

Solutions to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) What is the importance of an internal check for expenses?

(2) Describe the nature of internal checks for the following selling-expense items:

(*a*) Salesmen's salaries.

(*b*) Salesmen's traveling expenses.

(*c*) Postage.

(3) State the general principle that should be followed in developing an internal check for an expense item.

(4) Outline an internal check system for a payroll covering the selling and administrative divisions of a business enterprise.

Retain your answers and continue with the study of the next chapter.

CHAPTER IV

INTERNAL CHECKS (Continued)

28. Establishing Internal Checks for Cash.—The need for the setting up of proper safeguards for cash is urgent because of the nature of this asset. Cash is a temptation to many because it can be used as soon as it is appropriated, it is not bulky, and often it can easily be removed without immediate detection. The temptation to take cash cannot always be overcome. In the struggle between right and wrong, an individual often weakens simply because it is so easy "to get away with it." If an internal check is operated and the employes handling the cash are aware of the fact, the temptation to be dishonest is removed to a large extent. There is no system of internal check that has proven to be 100 per cent. safe. An important phase of an internal check is the employment of employes having a record of honest dealing. But even such individuals have been known to weaken and become a party to defalcations. The procedure in installing an internal check against defalcations is next described.

29. Cash-Receipts Internal Check.—A close check-up must be devised for controlling the receipt of cash from various sources. The responsibility of handling the cash receipts must be subdivided and not rest with one individual. Certain common methods of control will now be described.

1. *Selling Department Procedure.*
   - *a.* All cash sales should be recorded in a cash register, which prints the amount of the sale on a paper ribbon, and the cash should be placed in the register.
   - *b.* A cash sales slip or voucher should be prepared for each sale, and the slips or vouchers should be numbered in sequence.
2. *Treasury or Cashier's Department Procedure.*
   - *a.* Cash Sales.
     - *1′.* An employe from the cashier's office should count the cash in each cash register at the end of the day, and remove all the cash except the amount of the change fund.
     - *a′.* Cash-register receipts slips (Illustration 55) should record the daily cash receipts, and be placed in the bag containing the cash.
       - *1″.* The cash receipts should next be turned over to the deposit clerk, a different individual from the one who counted the cash in the register; and the deposit clerk makes out a bank deposit slip.
     - *2′.* Another clerk in the cashier's office should read the cash register sales totals for the day, or remove the sales tapes. The record of the cash removed from the registers must agree with the cash-register

sales tapes, and with the total of the cash sales vouchers numbered in series, after all numbers have been accounted for in full.

- *a′.* The sales readings or tapes should be given to the cashier for comparison with the report of cash removed from the registers.
  - *1″.* Small discrepancies are charged to an account, Cash Short and Over, while larger discrepancies call for an explanation.

- *b.* Accounts Receivable Collections.
  - *1′.* All incoming mail should be opened by a clerk whose honesty is unquestioned. It is good policy to bond the person handling this work.
  - *2′.* All currency, money orders, and checks should be listed on a record of cash received (Illustration 52), by the clerk opening the mail.
  - *a′.* The information listed should be, the date of receipt of the cash, name of the sender of the cash, and the amount.
  - *b′.* The record of cash received should be totaled to show the amount of the receipts, and then sent to the accounts receivable department for credit to be entered in the proper customers' accounts.
  - *3′.* The cash should be sent to the cashier's office and be given to the deposit clerk.
- *c.* Cash from various sources. Receipts of cash from sources other than cash sales and customers on account are generally for capital-stock subscriptions by employes, capital-stock sales, dividends and interest on securities owned, and interest earned on cash deposits.
  - *1′.* Capital stock subscription receipts are deductions on the payroll from employes' earnings; a bookkeeping entry is required, and no actual cash changes hands.
  - *2′.* When capital stock sales are made for cash, usually the treasury department receives the cash direct from the purchaser.
  - *a′.* A treasury department receipt or deposit slip should be verified, by the cashier and treasurer, by comparing it with the number of certificates issued at the selling price.
  - *3′.* Interest coupons clipped for deposit, and dividend checks are usually handled by the treasurer and verified by the cashier, or vice versa.
  - *4′.* Interest earned on bank deposits does not involve the actual handling of cash by the company employes.

3. *Accounting (Accounts Receivable) Department Procedure.*
   - *a.* The record of cash received is used to make the proper credit entries in the customer accounts.
     - *1′.* The record is then sent to the general accounting department to be compared with the daily deposit slip of cash received from customers, before the bookkeeping entry is made in the cash receipts journal.

30. Summary of the Principles for Cash-Receipts Internal Check.—To establish and maintain an effective internal check over the cash receipts of a business, it is necessary to conform to the following principles:

(*a*) Provide a record that itemizes the amount of each cash receipt, such as an individual sale or payment on account by a customer, etc.

(*b*) Designate a person to count the cash received from each different source each day.

(*c*) Appoint another person to compare and verify the record of the cash receipts with the cash count.

31. Cash Disbursements Internal Check.—The need for an effective internal check over the payment of cash is as necessary as the safeguarding of the cash receipts. The relationship between the payment of cash for materials purchased, expenses incurred, and payrolls prepared has been discussed in preceding sections. For each of these items necessitating the disbursement of cash, illustrations have been developed through to the accounts payable division of the accounting department. It is with this department that the detailed description of establishing an internal check over cash disbursements is begun.

1. *Accounting Department (Voucher Division, Accounts Payable) Procedure.*

a. In a properly designed accounting system, the purchase of any item of inventory, equipment, other asset, or expense, and the payroll preparation, are attested as proper expenditures by some departmental head before they come to the attention of the accounting department.

b. The approved expenditures in the form of invoices, bills, and payrolls, upon their arrival at the accounting department, are classified by the date of payment.

1′. Vouchers [Illustration 62 and 62 (*a*)] are prepared for the various expenditure items.

a′. The voucher clerk shows on the voucher the information revealed on the bill, invoice, etc., as to what accounts are affected and the amounts pertaining to each account.

1″. This is necessary in order to permit the proper entry to be made in the voucher register and in the expense distribution sheet. (Illustration 63).

b′. The vouchers are entered in the voucher register (Illustration 69) after being approved by the controller or some similar executive.

c′. The prepared vouchers are placed in a tickler file for future payment, in the order of their payment dates.

2. *Accounting Department (Disbursements Division, Accounts Payable) Procedure.*

a. The unpaid vouchers approved as to their legitimate expenditure, correct price and amount, and proper account distribution, are sent to the disbursements division of the accounting department prior to the payment dates.

b. The treasurer or some other general executive usually gives the voucher a final inspection and approval, and signs the voucher check.

1′. A daily record of checks issued is prepared and a copy sent to the general accounting department, where the bookkeeping entry is recorded in the check register.

2′. The check is mailed to the creditor, except checks for payrolls and petty cash reimbursements; these latter checks are cashed and the proceeds placed in the hands of the paymaster and the possessor of the petty cash fund.

c. The paid vouchers together with the attached memoranda must be filed away in orderly fashion by sequence of voucher numbers, for future reference and outside audit.

32. Summary of Principles for Cash Disbursements Internal Check.—The principles of an internal check covering cash disbursements provide for:

(*a*) The necessary approval of invoices, bills, payrolls, petty cash reimbursements, etc., by departmental heads prior to the presentation of them to the accounts payable department for payment.

(*b*) The review and verification of the accounts and amounts shown in the voucher distribution.

(*c*) The listing of each voucher in the voucher register.

(*d*) The final approval of the voucher and its payment by some general executive or fiscal officer.

(*e*) The filing of the paid invoices for future reference.

33. Petty Cash Internal Check.—The petty cash internal check is important because company employes have access to the actual cash in the petty-cash fund. The fund is not usually a large one, but nevertheless it is open to individual appropriation unless it is properly safeguarded. The principles of internal control over the petty cash are as follows:

1. *Selling, Administrative, Treasury, or Branch House Procedure.*

a. Within any of the above named departments or other departments where it is deemed necessary to provide a petty cash fund, two individuals should be made responsible for handling the petty cash.

1′. One of the parties should have the responsibility of inspecting and approving the item for payment.

a′. This act involves the preparation of a petty cash voucher (Illustration 48) authorizing the payment.

1″. The bill, invoice, cash register slip, or other form of receipt should be attached to the petty cash voucher before the item is presented to the petty cash fund cashier for payment.

2″. The petty cash voucher lists the date, the amount to be paid, and the name of the account to be charged.

2′. The other party has possession of the petty cash fund.

a′. His responsibility is to pay the petty cash vouchers as presented to him.

b′. His function should also include the comparing of the receipts attached to the petty cash vouchers with the vouchers.

c′. In some concerns, there is but one party in charge of a single petty cash fund. He is the cashier in the treasury department.

1″. He pays all petty cash vouchers as prepared by specified parties within the other departments.

b. When the petty cash fund is reduced to such an amount that it becomes necessary to replenish it, the party possessing the fund totals the paid petty cash vouchers and presents them to the accounting (accounts payable) department.

2. *Accounting Department (Voucher Division, Accounts Payable) Procedure.*

a. The description of this phase of internal check for petty cash is identical with the description for the cash disbursements control within the accounts payable division as described in Art. 31, Section 1.

3. *Accounting Department (Disbursements Division, Accounts Payable) Procedure.*

a. The procedure is the same as described in Art. 31, Section 2.

34. Summary of Petty Cash Fund Internal Check Principles.—The principles for insuring the proper measure of internal control over the petty cash should include:

(a) The appointment of one party having the authority to approve the payment of small amounts from the petty cash fund.

(b) The showing of the proper expense distribution on each petty cash voucher.

(c) The appointment of a party having the authority to possess and disburse the petty cash fund.

(d) The approval of the petty cash vouchers by some fiscal officer of the company before the petty cash fund is reimbursed.

35. Branch House Cash Internal Check.—There is no uniform method of establishing an internal check over the cash handled by a branch house. The method depends upon the degree of centralization of accounting control that is established by the home office. Many concerns centralize their accounting for the branches at the home office through the means of records and reports received from the branches. Some companies go to the other extreme and permit all transactions affecting a branch to be handled by a complete accounting system within the branch. Between these two extremes, there are many variations. The system here described assumes the existence of the following conditions: The accounts receivable records resulting from the branch sales are kept at the branch office, and the cash receipts from the branch customers are received at the branch office. A branch petty cash fund is also maintained at the branch for small

incidental expenses. All invoices for inventory items and expense items not paid from the petty cash fund are sent to the home office for payment.

The procedure is as follows:

1. *Branch House Procedure.*

a. Cash Receipts.

1′. The cash receipts are handled in the same manner as described in Art. 29, Section 1 and 2.

a′. A copy of the branch daily cash receipts record is mailed to the home office.

2′. The daily cash receipts are deposited at a local bank in the branch house city, to the credit of the home office.

3′. The branch daily cash receipts record and the branch daily deposit slip, when received at the treasury or accounting department of the home office, are compared by the cashier.

4′. Detailed cash audits by the company's traveling auditor should be made frequently at the various branch houses.

a′. The company audits are for the purpose of verifying the daily branch reports sent to the home office covering the cash sales, collections on accounts receivable, and cash deposits.

b. Petty Cash Fund.

1′. The petty cash fund should be placed in the hands of a bonded clerk.

2′. The manner of preparing the petty cash vouchers and making the payments therefrom is identical with the description in Art. 33, Section 1.

3′. When the fund reaches a certain minimum amount, the vouchers are summarized, totaled, approved by the branch manager, and sent to the home office accounts payable division in order that the fund be reimbursed.

2. *Accounting Department (Voucher Division, Accounts Payable) Procedure.*

a. The accounts payable department receives, approves, and vouchers the invoices and bills for inventory, expense, and payroll items.

1′. This procedure includes the preparation of the expense distribution and entry in the voucher register of all vouchered items, for the branch house.

3. *Accounting Department (Disbursements Division, Accounts Payable) Procedure.*

a. The vouchers approved and entered for payment are received from the voucher division.

b. A treasury department executive gives the voucher its final inspection and approval.

1′. A copy of each voucher check is sent to the general accounting department where the bookkeeping entry is made.

2'. The checks are mailed to the creditors covering inventory and expense items, and to the branch manager for payrolls and petty cash reimbursements.

3'. The paid vouchers are filed in voucher number sequence for future reference.

36. Summary of Principles for Branch House Cash Internal Check.—The principles of internal control for branch house cash include the following:

(*a*) The cash sales should be recorded by cash registers or sales slips, or other methods whereby the amount of each sale is itemized as a verification of the cash received. A copy of the record is sent to the home office.

(*b*) An itemized record of all cash received from customers on account should be prepared and a copy sent to the home office.

(*c*) The cash receipts should be deposited daily and an itemized report sent to the home office.

(*d*) The petty cash should be reimbursed by the home office.

(*e*) The transactions should be summarized in such a manner that the branch manager can check their accuracy and stamp his approval of same before a record is submitted to the home office.

(*f*) The records submitted to the home office should be uniformly and systematically inspected for approval by clerks and officers at the home office.

(*g*) The records at the branch office should be checked frequently by detailed audits made by the company auditors.

37. Cash Reconcilement Internal Check.—The reconcilement of the cash balance in the bank or banks can be used as an internal check against the cash balance as shown in the general ledger cash account and in the cash journal. While this verification is usually an external auditing feature, it nevertheless can be employed as a means of internal check on the cashier or other party responsible for the cash balance. The company auditor or a clerk in the controller's office can make the cash reconcilement to verify the accuracy of the cash balance shown by the books of account.

38. Establishing Internal Checks for Accounts Receivable.—An internal check should be developed for the asset, accounts receivable, for the purpose of preventing the covering up of embezzlements of cash by company employes. "Lapping" is a term used to describe the practice of hiding cash shortages. It is practiced in the following manner. The clerk receiving cash from customer A, say $500, does not credit it to A's account, but appropriates it for himself. Knowing that this fact will become known ultimately, the clerk waits until the end of the month and then applies cash received from some other customer or customers to the credit of A's account. This practice may keep on indefinitely until disclosed by an external audit. A system of internal check will eliminate or greatly reduce the possibility of this practice.

39. Trade Customers' Accounts Receivable Internal Check.—The necessity for an internal check covering customers' accounts was pointed out in the preceding article. The internal check is operated as follows:

1. Selling Department Procedure.

a. Copies of the customers' sales slips or invoices prepared by the billing division should be used as a basis for charging the customers' accounts.

b. Copies of the credit memorandums made in favor of the customers should also originate in the office of the sales department.

2. Accounting (Accounts Receivable) Department Procedure.

a. Where the business is large enough to warrant it:

1'. Certain clerks should be made responsible for entering only the debits in the customers' accounts from the duplicate copies of the invoices.

2'. Another clerk should be permitted to make only the credit postings for the sales returns and allowances, notes receivable, etc.

3.' Still another clerk should have the responsibility for entering the credits in the customers' accounts for cash received on account, as described in Art. 29, Section 2*b*.

a'. By this triple subdivision of responsibility, the possibility of falsifying the accounts is greatly reduced.

b. Where the business is too small to provide such a subdivision of labor, the use of the Accounts Receivable control account and the preparation of monthly statements are the other means of safeguarding the accounts receivable asset. The Accounts Receivable control account in the general ledger is a fairly valuable means of protecting the accounts receivable asset from manipulation.

1'. The power of the control account as an internal check consists in the following division of posting labor.

a'. One party posts the debits and credits to the subsidiary ledger.

b'. Another party posts the debits and credits to the general ledger control account.

1''. The first party is also required to take off an adding machine total of the customers' accounts with open balances at the end of each month.

a''. The total of the balances in the customers' ledger must agree with the control account balance.

d. The policy of sending detailed statements to customers at the end of each month, although a laborious task, unless bookkeeping machines are used, is a good check upon the accuracy of the customers' accounts.

1'. If a customer's statement does not agree with the customer's record on his own books, he will immediately enter into correspondence which will disclose discrepancies or defalcations.

3. *Treasury or Cashier's Department Procedure.*

a. See Art. 29, Section 2*b*, for a description of the internal control applicable to the accounts receivable within the treasury or cashier's department.

40. Company Employes' Accounts Receivable Internal Check.—The same principles apply to employes' accounts receivable as are described in Art. 39 pertaining to trade customers' accounts.

41. Branch House Accounts Receivable Internal Check.—The type of internal check devised to safeguard branch house accounts receivable depends upon the degree of centralization of the accounting system. If the accounts of the customers sold by the branch are kept at the home office, there are no peculiar problems not discussed in Art. 39, because customers' checks will be mailed to the home office. Where the branch office accounting system contains the customers' accounts, the branch also receives the cash collections from the customers. Under the latter condition, the principles of internal check as described in Art. 39 should be operative, and in addition, the branch house should submit to the home office records of daily billings and cash receipts from customers. Where the branch office maintains the detailed customers' accounts, frequent detailed audits should be made by the company's traveling auditors.

42. Summary of General Principles of Internal Check for Accounts Receivable.—In order to establish sound principles of internal check over the accounts receivable, the following principles should be incorporated in the accounting system:

(*a*) Provide for a subdivision of labor in posting the debits and credits to the customers' accounts in the subsidiary ledgers.

(*b*) Establish an Accounts Receivable control account and *keep* it in balance.

(*c*) Send detailed or itemized monthly statements to all customers.

43. Establishing Internal Checks for Notes Receivable.—The notes received from customers, in settlement of their open accounts, are usually kept by the treasurer. The procedure is as follows:

1. *Treasury Department Procedure:*

a. The notes received from customers are listed on a record of notes received (Illustration 59).

1′. The record is sent to a clerk in the accounts receivable division in order to allow the proper credits to be posted.

2′. A copy of the record of notes received is sent to the general accounting department for the general ledger posting which reflects the credit to the control account, Accounts Receivable.

3′. The notes are kept by the treasurer until the maturity date or until they are discounted at a bank.

a′. A subsidiary note register or record (Illustration 79) should be maintained if the company usually has a large number of notes. Such a record enables the company auditor to check the notes held by the treasurer with the least possible confusion.

2. *Accounting (Accounts Receivable) Department Procedure.*

a. This phase of the control is described in connection with the control for accounts receivable in Art. 39, Section 2.

44. Establishing Internal Checks for Securities Owned.—Stocks and bonds held for either temporary or permanent investment should be guarded with extraordinary care. If they get into the hands of an unscrupulous party, they may be transferred with a resultant loss to the company. Some company official should have the responsibility of safeguarding the securities, and it is usually the treasurer who is chosen for this purpose. The official selected should be bonded. A record of securities owned should be maintained to aid in checking them when an audit is made. The principles of internal check to control securities owned are as follows:

1. *Administrative Department Procedure.*

a. The authority for the purchase of the securities should be set forth in the minutes of the board of directors.

2. *Accounting (Accounts Payable) Department Procedure.*

a. The accounts payable department prepares the voucher authorizing payment for the securities, in accordance with the resolution set forth in the minute book.

b. The control account debit is built up from the entry made in the voucher register.

3. *Treasury Department Procedure.*

a. Upon receipt of the securities, the treasurer should enter the details in the record of securities owned.

b. The securities should be deposited in a safe deposit box in the bank by the treasurer and the deposit witnessed by some other official of the company.

1′. An agreement may be made with the bank whereby access to the safe deposit box is not permitted without the presence of two or more individuals designated by the board of directors and whose names are recorded in the files at the bank.

45. Establishing Internal Checks for Capital Stock Certificates.—Though unissued stock certificates of a corporation are not assets of the corporation, such certificates may bring about a loss to the corporation if they fall into the possession of unscrupulous parties. The blank certificates should be protected with care in the following manner:

1. *Treasury Department Procedure.*

a. The stock certificate book should be entrusted to the treasurer for safekeeping if no stock-transfer agent and registrar is appointed. In a large

corporation the stock certificates are generally issued and transferred by a bank or trust company acting as the stock-transfer agent and registrar of the corporation.

b. The treasurer authorizes the issue of the stock certificates upon receipt of cash from the purchasers.

1′. The method of control for such receipts is described in Art. 29, Section *2-c*.

c. A record of capital stock certificates outstanding should be kept in order that an up to date record of the names of stockholders, their addresses, and the number of shares held may be available.

1′. The record aids in verifying the number of shares represented in the capital stock accounts.

2′. It also serves as a basis for mailing dividend checks, and as the authority for mailing them to stockholders.

2. Administrative Department Procedure.

a. Some administrative official, generally the president, authorizes the issuance of the stock certificates by placing his signature thereon.

QUESTIONS

Solutions to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) Outline an internal check system covering the cash receipts of an industrial enterprise which has receipts from the following sources:

(*a*) Accounts receivable. Cash is received by mail.

(*b*) Interest on bonds and dividends on stocks owned.

(2) Outline an internal check system for an industrial concern covering its cash disbursements. Begin your discussion with the accounts payable division of the accounting department.

(3) Enumerate the fundamental internal check principles covering the handling of petty cash.

(4) Explain the necessity for establishing an internal check for accounts receivable.

Retain your answers and continue with the study of the next chapter.

CHAPTER V

MECHANICAL APPLIANCES USED IN ACCOUNTING SYSTEMS

46. Relationship Between Mechanical Appliances and Accounting Systems. In the early stages of the use of mechanical appliances in accounting work, the machines used, such as the adding machine, sales-order writing machine, and the cash register, were merely auxiliary appliances which eliminated a certain amount of routine clerical effort. Instead of long columns of figures being added by mental effort, the adding machine performed the work with less effort and with greater accuracy. The cash register rendered the service of adding the daily cash receipts and thus afforded a verification of the cash sales and cash received on account.

Mechanical accounting appliances today perform a vastly different service. Accounting machines and appliances are built into the accounting system as component parts of it. The mechanical appliances are not merely adjuncts to the system, but in many cases they are the major portion of the system.

47. Advantages of Use of Mechanical Appliances in the Operation of Accounting Systems.—Mechanical appliances are valuable aids in the operation of a modern accounting system because they:

(*a*) Standardize accounting operations and methods of handling transactions.
(*b*) Provide neater and more uniform records.
(*c*) Eliminate errors in recording and posting transactions.
(*d*) Facilitate speedy handling of large volumes of transactions.
(*e*) Provide an economical method of handling transactions.
(*f*) Procure detailed analyses not possible or practical to obtain in any other manner.
(*g*) Release brain-power for more constructive work.

Each of these seven advantages will now be described in detail.

(*a*) As a result of the standardization of accounting operations through the use of mechanical appliances, the same thing is done the same way all the time. The work is subdivided and each machine operator becomes highly efficient; the one best method of handling transactions is determined and followed; and the responsibility for certain operations is localized to individual machine operators.

Some machines can perform only one type of accounting work. Addressing machines, check writing machines, tabulating key punchers, and sorting machines, are of this kind. But many machines such as bookkeeping machines, calculating machines, etc., are of such nature that a variety of functions can be performed by them.

(*b*) The printed records made by machines are neater, more legible, and more durable than those prepared by pen and ink. The transactions handled by mechanical appliances also require a uniform or standard form on which the record is made, and this is an important advantage for making the records readily accessible as well as for proper filing for future reference.

(*c*) The elimination of errors in recording and posting operations, which results from the use of mechanical accounting appliances, is in itself of such importance that it often is sufficient to warrant the installation of mechanical appliances. Especially is this true in large concerns where statements cannot be held up because of an unbalanced ledger. Errors in recording and posting cannot be eliminated entirely where books are kept by hand. The location of errors requires time, and the time factor is of great importance in getting out statistical reports and financial and operating statements. Many mechanical appliances for accounting work have a check incorporated within the machine, which, by various methods, establishes a proof of the day's work on the standard forms used.

(*d*) Larger volumes of transactions can be recorded by the use of mechanical appliances, than can possibly be handled within the same time period by the same number of clerks. There is a certain maximum capacity at which all human beings as well as machines can operate. It is obvious to anyone, who has seen the volume of transactions handled by electric tabulating equipment within an hour's time, that it would be out of the question to attempt to do the same volume by the hand-written method. It is not that the same work could not possibly be done by hand, but that the length of time involved, the resultant errors, and the cost of clerical help would make the cost prohibitive.

(*e*) Though mechanical equipment for accounting may necessitate a considerable investment, the advantages from its use outweigh its cost. Not only does it save the salary expense of the large number of clerks that would otherwise be needed, but it produces neater records, reduces the likelihood of errors, and turns out a large volume of work with great speed.

(*f*) Mechanical accounting appliances procure accounting analyses otherwise unobtainable and this is one of the most important of the advantages resulting from the use of mechanical appliances in an accounting system. The present-day requirements upon the accounting department for analytical statements and statistical reports are extremely heavy. The need for information respecting production expenses and costs, distribution expenses and costs, administrative expenses and costs, budget schedules, and other facts makes it necessary to use some mechanical means for obtaining the data as rapidly as it is required. The detailed accounting analyses required by a large business concern can be procured in a practical and economical manner only by the use of mechanical accounting equipment.

(*g*) The use of mechanical accounting appliances releases the accountant's brain power for application to more fertile fields of accounting endeavor. The slogan, "Let the machines do the work; let the accountant think," may well be adopted today. The accountant, having all the details collected in almost any fashion he wishes, can concentrate upon the problem of presenting the facts to employes and executives in statement and report form.

48. Mechanical Appliances Designed for Use in Accounting Systems. There are many different kinds of mechanical appliances used in connection with accounting. The principal ones are as follows:

(*a*) Adding machines
(*b*) Calculating machines
(*c*) Billing machines
(*d*) Addressing machines
(*e*) Check protectors
(*f*) Check-signing machines
(*g*) Cash registers
(*h*) Time-recording machines
(*i*) Filing equipment
(*j*) Bookkeeping machines
(*k*) Tabulating equipment

There are different models and makes of the machines mentioned in the foregoing list and each has its individual qualities and peculiarities. The fact that machines of all the models and types are in daily use attests to their value in accounting systems.

The accounting appliances used in the preparation of original records, books of original entry, books of secondary entry, and statements and reports, respectively, are shown in Illustration 3. The functions of the various mechanical accounting appliances in the different divisions of an accounting system will now be described.

MECHANICAL ACCOUNTING APPLIANCES USED IN DIFFERENT DIVISIONS OF ACCOUNTING SYSTEMS

Original Records	Books of Original Entry	Books of Secondary Entry	Statements and Reports
Adding Machines	Adding Machines	Adding Machines	Adding Machines
Calculating Machines		Calculating Machines	Calculating Machines
Billing Machines	Billing Machines		
Addressing Machines		Addressing Machines	
Check Protectors			
Check-Signing Machines			
Cash Registers			
Time-Recording Machines			
Filing Equipment	Filing Equipment	Filing Equipment	Filing Equipment
	Bookkeeping Machines	Bookkeeping Machines	Bookkeeping Machines
Tabulating Equipment	Tabulating Equipment	Tabulating Equipment	Tabulating Equipment

ILLUSTRATION 3

49. Use of Mechanical Appliances in Connection with Original Records. The majority of mechanical accounting appliances have been designed for use in connection with original records. The kinds of work for which the different machines are used are described in the following paragraphs:

(*a*) *Adding Machines.*—Many of the original records mentioned in Chapters II, III, and IV and later described in greater detail in Chapter VIII, require the use of an adding machine when information is listed on the records. Examples of the original records and reports, on which are listed figures that must be added, are sales slips, stores requisitions, vendors' invoices, vouchers, job-order cost cards, unit cost sheets, production records, payroll sheets, labor distribution sheets, coin and currency analysis sheets, cash receipts slips, daily deposit slips, expense distribution sheets, etc. Many original records to not require the use of the adding machine to speed up the addition for the individual record, but the appliance is used to obtain totals for a group of like records. Examples of original records of this type are sales slips, sales orders, stores requisitions, invoices, vouchers, time tickets, customers' invoices, petty cash vouchers, etc.

(*b*) *Calculating Machines.*—Calculating machines are adapted to the use of accounting because they perform other mathematical operations besides addition. The calculating machine will also subtract, multiply and divide. Original records requiring such mathematical computations can be completed with dispatch by an efficient operator.

Some uses of the calculating machines in connection with original records are as follows: Price extensions are made on stores requisitions, customers' invoices, bills of materials, time tickets, payroll sheets, etc. The term *extension*, as here used, denotes the multiplication of a quantity by a price. Calculating machines are also used to verify invoices of vendors, to compute trade and merchandise discounts, etc.

(*c*) *Billing Machines.*—One make of billing machine performs several functions besides billing the customer on an invoice form. By the use of carbon paper when the salesman's order is billed, copies of the order are also prepared for use as a journal record, a ledger record, and a statement for mailing to the customer at the end of the month. The salesman's order shows the quantity and description of items. Space on the order provides for the unit price and totals. The extensions are made by a calculating machine, and in turn are typed on the billing machine. Certainly, a billing machine of this type results in the saving of much time.

(*d*) *Addressing Machines.*—Addressing machines can be used in several ways in connection with accounting activities. The addressing machine, or addressograph, makes use of a stencil plate on which is cut the name, address, and other information wanted. The stencil plates are arranged in the order desired before placing them in the addressograph machine. The forms on which the addresses or names are to be printed are then fed into the machine, and automatically the information on the stencil plates is printed on the forms. This appliance is used for original records such as monthly statements, pay checks, and time-clock cards.

(*e*) *Check Protectors.*—A check protector is a protective device designed to prevent the raising of the amount for which the check is originally drawn. When the check is inserted in the check protector and the keys are pressed for the figures desired, the amount for which the check is drawn is cut and inked into the check.

(*f*) *Check-Signing Machines.*—The check-signing machine is a great time saver where large numbers of checks are signed each month. By having the blank checks printed in sheets of twelve or fifteen each, a mechanical arrangement of fountain pens is set up over the sheet of checks. The operator, by guiding his pen on the signature line, automatically signs the other checks on the same sheet.

(*g*) *Cash Registers.*—The cash register is an accounting appliance from which can be obtained a record of cash sales, cash received on account, and cash paid out.

The value of these original records compiled by the cash register, as an internal check was indicated in Chapter IV.

(*h*) *Time-Recording Machines.*—There are several different types of time-recording machines. As the name implies, this class of mechanical appliance is used in connection with records such as time tickets, time-clock cards, job-order cards, and even payroll sheets. The electric time-clock card recorder automatically prints the time each workman enters and leaves the plant. Some types of clocks print in red the late arrival or early departure of the workman.

The dial time recorder prints the time in and out of the plant of each workman each day on a roll of paper which is used in preparing the payroll sheet. This type of original record is therefore a combination of a time record and payroll sheet.

An electric time-clock job-order card recorder records each day the time worked upon each job by each workman. When a job is started the job-order card is inserted in the time clock, and pulling the lever records the time. After the job is completed, the same procedure is gone through and the time of finishing is recorded. The elapsed time can therefore be computed.

(*i*) *Filing Equipment.*—Various types of appliances for filing forms and records are on the market. Their chief value in accounting is that they enable records to be filed in an orderly manner for convenient reference.

(*j*) *Tabulating Equipment.*—The key punch and the gang punch, classified under the heading of tabulating equipment, are the two pieces of mechanical equipment used in connection with original records. Tabulating cards are prepared or punched for use in other tabulating machines, from original records such as stores requisitions, time tickets, invoices, record of cash received on account, vouchers, etc.

50. Use of Mechanical Appliances in Connection with Books of Original Entry. The mechanical appliances utilized in connection with journals and registers are not nearly so varied as those used in connection with original records. Nevertheless mechanical equipment for use in connection with books of original entry performs valuable services. The commonly used devices are:

(*a*) *Adding Machines.*—Adding machines are used in connection with books of original entry to arrive at accurate totals for the amounts entered in the various columns.

(*b*) *Billing Machines.*—The billing or invoice machine is used in connection with books of original entry when the accounting system provides that copies of the invoices are to serve as the sales journal.

(*c*) *Filing Equipment.*—Loose-leaf binders for journals are classified as filing equipment. Shelves with pigeonholes or compartments are used to hold tabulating cards which have been punched and are being held for sorting.

(*d*) *Bookkeeping Machines.*—There are a number of different bookkeeping machines on the market. They are used to print the entries in various journals. The bookkeeping machine operator transcribes the information from the original records to the journal sheets.

(*e*) *Tabulating Equipment.*—The tabulating equipment, used in connection with books of original entry, consists of the automatic sorting machine and the tabulating machine. The sorting machine sorts the punched tabulating cards for whatever may be the desired purpose, in accordance with the information punched thereon. The tabulating machine next utilizes the sorted tabulating cards to tabulate the desired information, from which journal entries are prepared.

51. Use of Mechanical Appliances in Connection With Books of Secondary Entry.—The accounting machines used in connection with books of secondary entry likewise are few in number but of great importance to the successful operation of an accounting system of a medium sized or a large concern. They are:

(*a*) *Adding Machines.*—Adding machines are useful in any accounting system where totals of the debit and credit columns in the ledger accounts must be run.

(*b*) *Calculating Machines.*—A calculating machine can be of use in connection with ledgers, in the making of additions of debit and credit columns, and in the subtraction of one column total from the other column to arrive at an account balance. The calculating machine can be used also in connection with inventory ledgers where prices and values are recorded as well as quantities. The multiplication function can be utilized to verify the balances. The quantity multiplied by the price will give the value of the balance on hand.

(*c*) *Addressing Machines.*—The addressograph is used to head the ledger sheets with the names and addresses of the customers. It is also used to place the headings on the statements prepared monthly and sent to customers.

(*d*) *Filing Equipment.*—Portable trays and drawers are used to hold loose-leaf ledger sheets while they are awaiting posting in the bookkeeping machines. The receptacles have patented inserts or dividers to separate the accounts in alphabetical order. File cases are provided to hold the active and the inactive accounts. Visible-ledger file cases are a valuable type of accounting equipment. The ledger sheets are inserted in individual receptacles held in a very thin metal drawer. The drawer which is only about one-half an inch in depth, when pulled out full length, can be dropped down so that the outer end rests upon a table. It is easy then to locate the ledger account, remove it from the file, make the necessary entries and reinsert the record. Much time can be saved by this device.

(*e*) *Bookkeeping Machines.*—The bookkeeping machine plays an important part in the operation of an accounting system. The ledger sheets or cards are posted by the bookkeeping machine operator from original records, such as customers' debit and credit memorandums, record of cash received from customers, journal vouchers, store requisitions, vendors' invoices, etc.

The bookkeeping machine is highly automatic. When the ledger sheet is inserted, the operator presses the keys to take off the old balance appearing upon the ledger sheet. Then the amount on the original record, such as a customer's invoice, is pressed upon the proper keys and this action prints the amount in the debit column of the customer's account and shows the new increased balance. All of the billings or invoices for one day's business are posted at one time. At another

period during the day, all cash receipts from customers are posted as credits. At another time the miscellaneous debit and credit memorandums are posted. Prior to the posting of any one of these groups of items, the original records are sorted alphabetically and placed in the ledger file in front of the proper ledger sheets. This process is known as "stuffing" the ledger.

(*f*) *Tabulating Equipment.*—The automatic sorting machine and the tabulating machine sort the tabulating cards and tabulate the information contained thereon for ledger-account purposes. This information is used to keep the ledgers posted up to date. The ledger records kept under this plan depend upon the extent to which the tabulating system is used. Some of the ledger records that are handled by this system are the ledgers for the general accounts, accounts receivable, accounts payable, store accounts, expense accounts, and inventory accounts. Information gathered by the tabulating machine method is posted to the ledger accounts by groups of like transactions, such as billings, cash credits, journal vouchers, etc.

52. Use of Mechanical Appliances in Connection with Statements and Reports.—The use of mechanical appliances in the preparation of accounting statements and statistical reports is not so great as in connection with original records, journals and ledgers. The appliances used are:

(*a*) *Adding Machines.*—Adding machines are used to add vertical and horizontal columns of figures after they have been entered on statements and reports.

(*b*) *Calculating Machines.*—In the preparation of statements and reports, calculating machines are used: to ascertain unit costs on the cost sheets; to compute inventory turnover rates, working capital ratios, and percentage analyses on the manufacturing cost reports, profit and loss statements, and balance sheets; and to arrive at many similar ratios.

The multiplication function of the machine is used to figure sales and cost of sales of various lines of products. This information is needed in the preparation of statistical reports. The subtraction and addition functions can be utilized in the preparation of reports and statements.

(*c*) *Filing Equipment.*—Filing equipment for statements and reports varies from various types of binders for small reports to stands, racks, cabinets, etc., for large reports. Proper filing equipment permits ease in presentation and safety in storage.

(*d*) *Bookkeeping Machines.*—The type of equipment applicable to report and statement preparation is the typewriter-bookkeeping machine. The statements and reports are often prepared in long-hand and then typed upon regulation forms.

(*e*) *Tabulating Equipment.*—The electric tabulating machine is an appliance with a printing attachment, which permits the printed tabulation of any desired figures punched in the tabulating cards. With the use of this piece of mechanical equipment, a variety of statements and statistical reports can be prepared.

QUESTIONS

Solutions to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) What are the benefits derived from the use of mechanical accounting appliances in an accounting system?

(2) What mechanical accounting appliances can be used in connection with the preparation of the following:

(*a*) Original Records?

(*b*) Books of original entry?

(*c*) Books of secondary entry?

(*d*) Statements and reports?

Look over your answers to the questions following Chapters III, IV, and V and immediately send them to the Schools for correction. Continue with the study of the next chapter.

CHAPTER VI

PROCEDURE PRELIMINARY TO SYSTEM DESIGNING

53. The System Designer.—The accounting system should be designed by a good accountant or accountants. The designer or designers should be intimately acquainted with accounting principles. They should also possess a broad understanding of general accounting practice. The accountants engaged in system building and installation should also have a knowledge of the fields related to accounting, such as business law, economics, finance, marketing, statistics, and such engineering factors as production scheduling and planning, time and motion study, and plant layout. The possession of a knowledge of the relationship between the fields mentioned and accounting is of great value to the designer of an accounting system. Even if he possesses such knowledge, the best system designer in the world cannot sit down at his desk and design a system that will fit the necessary requirements of the business at every point without having an intimate knowledge of the peculiarities of the business. The designer must study all the intricate details of the business in order to develop the best possible accounting system.

Whoever the accounting-system designer may be, he must possess certain qualities and traits: First of all, he should have a keen mind which possesses the ability to analyze and synthesize. This means, from an accounting viewpoint, that the accountant must be able to analyze or break down the transactions, departments, conditions, etc., for study and also to build up a system to account for the situations discovered, in the shortest, simplest, most economical, and satisfactory fashion.

In the second place, a trained accounting mind and an intimate knowledge of all the branches of accounting are necessary for the man who would design accounting systems. By possessing a broad knowledge of the field of accounting, the system designer is able to anticipate system problems and provide for their solution with a great degree of accuracy. He knows what to do and how to do it.

In the third place, the fitness of a system designer depends upon his experience. Experience in accounting and in other allied business fields, gives the system builder the broad vision necessary for the designing of practical systems. Experience is a vital factor in system designing, and it comes only with time and practice.

Next, let us discover the persons who are likely to be qualified to design accounting systems. The public accountant is probably the first choice. He possesses the necessary qualifications: knowledge of accounting principles, wide experience, and ability to analyze and synthesize.

Company accountants, auditors, and controllers may be qualified to serve as accounting system designers. Their best recommendation for such an assignment is their familiarity with the problems of their individual companies. As a group,

they lack the variety of practical experience that is valuable in the designing of accounting systems.

A third group of individuals who are qualified to design a special phase of a complete accounting system are cost accountants and industrial engineers. Their intimate knowledge of plant production and the cost problems involved, provided they also possess a knowledge of general accounting theory, makes them ideally fitted to design the best possible cost accounting system to suit the needs of the plant.

Situations may arise whereby the services of the three groups mentioned may be pooled together. Each group being specially trained in its respective field, can analyze the problems from a different viewpoint. Pooling the viewpoints and combining the best of each should result in the best possible accounting system.

54. Systems for New Organizations and for Old Established Concerns.—In the development of an accounting system, the system designer may be called upon to render services in two situations radically different in nature. The designing of a system for a new organization often requires a different type of system designer than is required to revise an old system.

A newly organized enterprise for which a complete accounting system is to be designed usually calls for the services of a public accountant, because of his general experience and special training. This holds true particularly in connection with non-industrial enterprises, and for the general accounting system of a newly organized industrial concern. Unless the public accountant has made a very comprehensive study of industrial problems and cost systems, he is frequently aided by an industrial engineer or a competent cost man in designing the cost system which should tie into the general accounting system of an industrial enterprise.

The accounting system of an old established business enterprise is often revised. Less frequently a complete new system is installed. In a small concern, the company auditor or controller may be the designer of the revised or new system. The company cost accountant and industrial engineer may have a part in the designing of the system, if the concern is an industrial organization.

The designing of a system from preliminary studies under each of the two circumstances is described in Chapter VII.

55. Outline of Knowledge Required Before the Preliminary Study is Begun. Regardless of the individual or group of individuals that may be chosen to design the accounting system, knowledge of certain matters is required and a certain procedure should be followed. The following points must be thoroughly understood:

(*a*) The purpose of an accounting system.
(*b*) The necessity for the use of an accounting system.
(*c*) The general principles underlying all accounting systems.
(*d*) Records and forms.
(*e*) The functions of the various books of account.
(*f*) The performance of different types of mechanical appliances.
(*g*) The nature of accounting statements and statistical reports.

Something will now be said respecting each of these points.

(*a*) The purpose of an accounting system is to establish a comprehensive plan for the recording of the business transactions from the time they originate until they are presented in the condensed form of statements and report summaries. The development of an accounting system implies the use of specific controls and checks for safeguarding the values owned by the business.

(*b*) An accounting system is necessary because of the need of:

(1) Having a permanent record of the transactions for future reference.

(2) Preparing operating and financial statements and statistical reports from the permanent record.

(3) Providing historical data that will be useful in the preparation of budget estimates.

(4) Furnishing a record that makes possible an external audit.

(5) Creating and retaining records for tax purposes.

(6) Complying with certain legal requirements.

(7) Aiding in the forecasting of future business policies.

(*c*) The general principles underlying all accounting systems are:

(1) The providing for accurate analyses of the business transactions.

(2) The collecting of the transactions on the proper forms and records.

(3) The recording, within the books of account, of the transactions that have been collected on the forms.

(4) The establishing of the proper internal checks.

(5) The preparing of the necessary statements and statistical reports from the recorded transactions.

(6) The providing for internal and external audits of the accounting system.

(*d*) A knowledge of records and forms enables the system designer to foresee:

(1) The number of forms desired.

(2) The departments in which the filled-in forms are to originate.

(3) The detailed or summary data that are to be recorded on the forms.

(4) The parties to be made responsible for the preparation of the forms.

(5) The disposition of the forms; that is, where they are to be sent when the data have been entered thereon.

(*e*) An understanding of the functions of the various books of account enables the system designer to know:

(1) The journals necessary to record the data gathered on the forms.

(2) The ledgers required to classify the transactions in account form.

(3) The accounts needed to supply the analyses of the transactions for statement purposes.

(4) The parties to be made responsible for the bookkeeping and accounting activities.

(*f*) An acquaintance with the performance of different types of mechanical appliances makes it possible for the system designer to plan to use machines where the volume of transactions of a particular type is sufficient to justify this. The following points must be considered:

(1) The need for detailed analyses such as cannot be obtained economically except by the use of mechanical equipment.

(2) The departments in which the machines are to be placed.

(3) The parties to be assigned as operators of the machines.

(*g*) A familiarity with the nature of accounting statements and statistical reports enables the system designer to determine:

(1) The number and the nature of the statements and reports to be prepared.

(2) The frequency with which the statements and reports are to be prepared.

(3) The departments and individuals designated to receive the statements and reports.

(4) The parties to be charged with the responsibility of preparing the reports.

56. Aids to be Used in Preliminary Study.—Before the system designer undertakes the study of a business concern for the purpose of developing an accounting system, he should provide certain methodical aids to assist in gathering the information. He should map out a certain procedure or method of gathering the facts pertinent to the development of the accounting system. The methodical aids consist of a questionnaire and a note book.

The questionnaire can be a standard form designed by the system man for use in connection with any job, or it may be a special form prepared for each different assignment. A standard form is probably the best type of questionnaire. It is easier to follow, and if properly developed, will omit few pertinent points pertaining to the information needed in developing the accounting system. The questionnaire prevents the system man from overlooking any outstanding fact that is required to develop a proper system.

The note book is used for the purpose of making comments on peculiar conditions for which no space is provided in the questionnaire. It is likewise valuable for use as a supplement to the questionnaire. Certain conditions are present in different business concerns that require comments that cannot conveniently be entered in a questionnaire.

57. The Questionnaire.—There is no standard method to be followed in the preparation of a questionnaire. It is developed in accordance with the desires of the individual system designer. It should follow some logical order of development and all facts pertaining to each phase of an accounting system should be grouped together. This simple feature will save time in gathering data and in developing the accounting system therefrom.

A sample form of questionnaire is shown on the following pages. This form does not list every conceivable question that will arise in connection with the survey of all types of business. It does, however, list a wide variety of general questions applicable to many different business types.

ACCOUNTING SYSTEM QUESTIONNAIRE

A—The Company.
1. Name.
2. Address.

B—Type of Business.
1. General group.
2. Specific group.
   - *a.* Subdivision of specific group (exact nature of business).

C—Trade Association for Businesses of This Group.
1. Name.
2. Address.
3. Is the company a member?

D—Form of Business Ownership.
1. Sole proprietorship.
2. Partnership.
3. Corporation.
4. Other.

E—Name of Owner or Owners.
1. Proprietor.
2. Partners.
3. Officers.
4. Board of directors.

F—Capital Investment.
1. Sole proprietorship.
   - *a.* Original cash investment.
   - *b.* Accumulated earnings allowed to increase investment.
2. Partnership.
   - *a.* Original cash investment of each partner.
   - *b.* Accumulated earnings allowed to increase investment.
   - *c.* Salary agreement.
   - *d.* Profit and loss distribution basis.
3. Corporation.
   - *a.* Incorporated under laws of what state.
   - *b.* Authorized capital stock.
     - *1.* Classes.
     - *2.* Number of shares of each class.
     - *3.* Par value of each class.
     - *4.* Value of each class.
   - *c.* Unsubscribed capital stock.
     - *1.* Number of shares of each class.
     - *2.* Value of each class.
   - *d.* Unissued capital stock.
     - *1.* Number of shares of each class.
     - *2.* Value of each class.
   - *e.* Treasury stock.
     - *1.* Number of shares of each class.
     - *2.* Value of each class.
   - *f.* Outstanding capital stock.
     - *1.* Number of shares of each class.
     - *2.* Value of each class.
   - *g.* Stock issued at a discount.
   - *h.* Stock sold at a premium.
   - *i.* Stock certificates issued by whom?
   - *j.* Stock records kept by whom?
   - *k.* Stock transfers made by whom?
   - *l.* Dividend checks issued by whom.
   - *m.* Dividends.
     - *1.* Rate for each class of stock.
     - *2.* Date paid.

G—Bonded Indebtedness.
1. Classes of bonds authorized.
2. Amount of each class.
3. Issued at a discount of ____%.
4. Issued at a premium of ____%.
5. Number of years for which issued.
6. Maturity date.

H—Type of Business Organization.
1. Military type.
2. Line and staff type.
3. Obtain organization chart or information for preparation of a chart.

I—Divisions of Business.
1. Non-industrial
   - *a.* Specific names.
     - *1.* Specific functions of each.

2. Industrial.
   - *a.* Manufacturing.
   - *b.* Selling.
   - *c.* Administrative.
   - *d.* Financial.
   - *e.* Branches.
   - *f.* Others.
     - *1.* Specific functions of each.

J—Departments of Business.
1. Non-industrial.
   - *a.* Specific names.
   - *b.* Location, building, floor, etc.
   - *c.* Space occupied.
   - *d.* Specific functions performed by each.
   - *e.* Equipment in use.
   - *f.* Number of employes.
2. Industrial.
   - *a.* Manufacturing departments.
     - *1.* Specific names.
     - *2.* Location in what buildings, or on what floor.
     - *3.* Specific function performed by each department.
     - *4.* Equipment in use.
     - *5.* Number of workmen.
   - *b.* Service departments.
     - *1.* Specific names.
     - *2.* Location in what building, or on what floor.
     - *3.* Specific function performed by each department.
     - *4.* Equipment in use.
     - *5.* Number of workmen.
   - *c.* Average number of workmen.
   - *d.* Branch houses (same information as listed under *J2-a* and *b*).

K—Personnel of Business.
1. General officers.
   - *a.* Titles.
   - *b.* Names.
2. Divisional officers.
   - *a.* Titles.
   - *b.* Names.
3. Departmental officers.
   - *a.* Titles.
   - *b.* Names.
4. General offices.
   - *a.* Number of employes.
5. Divisional offices.
   - *a.* Number of employes.
6. Departmental offices.
   - *a.* Number of employes.
7. Departments (see J).

L—Consultation With General Officers and Departmental Executives.
1. General officers.
   - *a.* Ascertain their desires with respect to:
     - *1.* Special types of departmentalization.
     - *2.* Special types of controls.
     - *3.* Special types of internal checks.
     - *4.* Special types of mechanical appliances.
     - *5.* Special types of accounting statements.
     - *6.* Special types of statistical reports.
     - *7.* Frequency with which statements and reports are wanted.
2. Departmental executives.
   - *a.* Ascertain their desires with respect to:
     - *1.* Types of reports needed.
     - *2.* Types of mechanical appliances desired.

M—Nature of Transactions.
1. List the names of the specific operating and service departments as, for example:
   - *a.* Purchasing.
   - *b.* Stores.
   - *c.* General executive.
   - *d.* General office, clerical.
   - *e.* Sales office.
   - *f.* Treasury or cashier.
   - *g.* General accounting.
   - *h.* Voucher or accounts payable.
   - *i.* Accounts receivable.
   - *j.* Cost.
   - *k.* Payroll.
   - *l.* Engineering.
   - *m.* Personnel.
   - *n.* Maintenance.
   - *o.* Manufacturing.
     - *1.* Specific names:
   - *p.* Power.
   - *q.* Forge.
   - *r.* Other departments.
   - *s.* Sales room or sales departments.
   - *t.* Delivery.
   - *u.* Budget.
2. Type of transactions originating within each department.
3. Forms:
   - *a.* Used to collect information.
     - *1.* Obtain copies of all forms in use.
   - *b.* Prepared by whom.
   - *c.* Checked, verified, or approved by whom.
   - *d.* Delivered to what department upon completion.
   - *e.* Form delivered to whom in the department to which it is sent.
   - *f.* Affect what books of original entry.
   - *g.* Affect what books of secondary entry.
   - *h.* Affect what accounts.
4. Mechanical appliances used.
5. Internal check responsibility assigned to whom.

N—Inventory Control.
1. Inventories handled and average investment in each.
   a. Raw materials.
   b. Work in process.
   c. Finished goods.
   d. Merchandise.
   e. Branch.
   f. Consignment.
   g. Construction in progress.
   h. Supplies.
2. Supervisors or parties responsible for inventories.
3. Is freight-in added to inventory value?
4. Physical counts taken when?
5. Is perpetual inventory in use?
   a. Quantity.
   b. Value.
6. Are minimum and maximum points used?
7. Physical inventory control.
   a. Method of ordering stock items.
   b. Method of receiving stock items.
   c. Method of storing stock items.
   d. Method of issuing stock items.
   e. Method of safeguarding stock items.
   f. Method of pricing stock items.
8. Internal checks in effect.
9. Original records and forms collected under *M*.

O—Expense Control.
1. Expense groups.
   a. Manufacturing overhead.
   b. Selling.
   c. Administrative.
   d. Financial.
   e. Others.
2. Special problems in relation to specific expense accounts.
   a. Freight-in.
   b. Cartage-in.
   c. Freight-out.
   d. Sales returns.
   e. Sales allowances.
   f. Commissions.
   g. Depreciation.
   h. Depletion.
   i. Bad debts.
   j. Other estimated expenses for which a corresponding credit is set up in operating reserve accounts.
   k. Other accounts.
3. Control accounts for expenses.
4. Internal checks in use.
5. Parties responsible for expense control.
6. Reduction of expenses.
7. Expense analysis and distribution.
8. Original records and forms collected under *M*.

P—Labor Control.
1. Method of supervising the punching of time-clock cards.
2. Wage payment plan in effect.
   a. Day-work rates.
   b. Piece-work rates.
   c. Group time rates.
   d. Wage incentive schemes.
3. Name of party who prepares time tickets.
4. Name of party who verifies time tickets before sending them to the payroll department.
5. Payroll department activities.
   a. Reported under *M*.
   b. Parties responsible for approval of payrolls and paying off.
   c. Method of paying.
      1. Cash.
      2. Check.
6. Internal checks in effect.
7. Original records and forms collected under *M*.

Q—Cash Control.
1. Sources of cash receipts.
   a. Cash sales.
   b. Payments on account.
   c. C.O.D. sales.
   d. Others.
2. Chief forms in which cash is received.
   a. Currency and coin.
   b. Checks.
   c. Money orders.
   d. Drafts.
   e. Stamps.
3. Depositories.
4. Method of verifying cash receipts.
5. Method of verifying cash disbursements.
6. Is an adequate voucher system in operation?
7. Method of handling petty cash.
8. Method of handling branch-house cash.
9. Supervisors or parties responsible for handling cash.
10. Internal checks in effect.
11. Original records and forms collected under *M*.

R—Accounts Receivable Control.
1. Sales made under what terms.
2. Credit sales orders passed upon by whom.
3. Method of billing customers.
4. Are monthly statements sent customers?
5. Age analysis made of customers' accounts, with what frequency?
6. Subsidiary ledgers balanced with control accounts daily or monthly?
7. Sources of debits to customers' accounts.
8. Sources of credits to customers' accounts.
9. Supervisors or parties responsible for handling accounts receivable.
10. Internal checks in effect.
11. Original records and forms collected under *M*.

S—Notes Receivable Control.
1. Number of notes received monthly.
2. Parties approving acceptance of customers' notes.
3. Provision for safe-keeping.
4. Parties responsible for safe-keeping of notes.
5. Provision for collection.
6. Internal checks in effect.
7. Original records collected under *M*.

T—Securities Owned Control.
1. Parties authorizing purchase.
2. Parties authorizing sale.
3. Provision for safe-keeping.
4. Parties responsible for safe-keeping of securities.
5. Internal checks in effect.
6. Original records collected under *M*.

U—Equipment and Property Control.
1. Groups.
   a. Land.
   b. Wasting assets.
   c. Buildings.
   d. Machinery.
   e. Trucks.
   f. Store.
   g. Office.
   h. Other equipment groups.
2. Control accounts.
   a. Names of specific control accounts.
3. Subsidiary records.
4. Depreciation rates.
5. Depletion rates.
6. Book valuation.
7. Appraisal valuation.
8. Parties responsible for keeping records
9. Internal checks in effect.
10. Original records collected under *M*.

V—Cost Control.
1. Type of production.
   a. Process.
   b. Job.
   c. Joint.
   d. By-Product.
2. Type of Cost System.
   a. Process.
   b. Job.
   c. Joint.
   d. By-Product.
   e. Estimating.*
   f. Standard.
   g. Distribution.†
3. Departmentalization.
   a. Producing.
      1. Specific names and functions (see *J*).
   b. Service.
      1. Specific names and functions (see *J*).
4. Peculiar methods of controlling cost elements.
   a. Raw materials (also see *N*).
   b. Direct labor (also see *P*).
   c. Overhead expense (also see *O*).
5. Overhead expenses.
   a. Methods of collecting overhead expenses.
   b. Methods of distributing overhead expenses.
   c. Methods of costing overhead expenses.
6. Peculiar methods of controlling inventories.
   a. Raw materials (also see *N*).
   b. Work in process (also see *N*).
   c. Finished goods (also see *N*).
7. Peculiar cost problems.
   a. Raw materials.
   b. Direct labor.
   c. Overhead expenses.
8. Cost statements prepared.
   a. Itemize the statements.
9. Cost reports prepared.
   a. Itemize the reports.
10. Parties responsible for various phases of cost system.
11. Internal checks in effect.
12. Original records collected under *M*.

W—Budgetary Control.
1. Personnel of budgetary control committee.
2. Method of collecting preliminary data.
3. Method of preparing budget schedules for:
   a. Income.
   b. Expense.
   c. Production cost.
   d. Cash.
   e. Construction.
   f. Expenditures.
   g. Estimated or forecasted operating and financial statements.
4. Method of approving budget schedules and complete budget.
5. Method of providing for budget revision.
6. Method of reporting budget comparisons with actual results.
7. Party responsible for operation of budget.
8. Original records collected under *M*.

X—Accounting Department Control.
1. Type of system.
   a. Cash basis.
   b. Accrual basis.
2. Original forms and records received from other departments.
3. Mechanical appliances in use.

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*An estimating cost system is a plan for reconciling the preestimated costs of jobs with the actual costs after the jobs are completed. A system of this type is not generally used when a regular process or job order system is used.

†A distribution cost system is a method used to analyze the cost of sales, selling expenses, and profits, by lines of products, classes of customers, and geographical territories.

4. Bookkeeping procedure.
   a. Books of original entry used.
      1. Parties responsible for maintaining journals.
      2. Average daily time required for work on each journal.
   b. Ledgers used.
      1. Parties responsible for maintaining ledgers.
      2. Average daily time required for work on each ledger.
5. Chart of accounts incorporating code system.
   a. Assets.
   b. Liabilities.
   c. Proprietorship.
   d. Incomes.
   e. Expenses.
6. General accounting statements prepared.
   a. Names.
   b. Frequency of issue.
7. Statistical reports prepared.
   a. Names.
   b. Frequency of issue.
8. Internal audits.
   a. Names.
   b. Frequency with which internal audits are made.
9. External audits.
   a. Nature.
      1. Cash.
      2. Detailed.
      3. Balance sheet.
   b. Frequency with which external audits are made.

58. Provision for Gathering Data for Use in Designing a System.—It may seem that the foregoing questionnaire is exceedingly long. But the more questions and conditions that are anticipated before the collection of the data is begun, the easier will be the job of obtaining the information needed to construct the accounting system.

The sample questionnaire has many general questions applicable to all types of businesses, but for the most part it contains questions pertaining more or less specifically to trading and industrial concerns. Special provisions would have to be made for other business groups such as, governments, hospitals, hotels, educational institutions, transportation companies, financial and insurance companies and other specialized enterprises.

For a newly organized business concern, there is need to obtain supplementary information from similar types of business already in operation. Even for an enterprise already established, it may be good policy to obtain pointers and information on trade practices of competitors. Such information may be a valuable aid in revising a system. Trade association literature, if available, is likewise of assistance in designing a new system. This is where the services of a public accountant are particularly valuable. He can draw upon his past experience as an aid in designing a system before operations have begun. Whether or not there has been a study made of a competitive business, or one has had access to a trade association, the system designer can obtain much needful information from the promoters, organizers, officers, and directors of the new concern.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) What three qualities should be possessed by an individual engaging in the work of system building?

(2) (*a*) Who are included in the three general groups qualified to design accounting systems?

(*b*) What are the peculiar qualifications possessed by each group?

(*c*) Which of these groups is especially fitted to install an accounting system in a newly organized enterprise, and which is best fitted to revise an accounting system in an established enterprise?

(3) Of what use is the questionnaire in making a preliminary study of a business enterprise prior to designing an accounting system?

Retain your answers and continue with the study of the next chapter.

CHAPTER VII

DESIGNING AN ACCOUNTING SYSTEM FROM PRELIMINARY STUDIES

59. Information Provided by the Preliminary Study.—The preliminary study of a business enterprise, for the purpose of installing an accounting system provides the necessary information for the designing of the system. It is here assumed that such a study is to be made and that the important facts learned will be grouped under the major headings of the questionnaire shown in the preceding chapter. These headings are as follows:

A—Name and address of company.
B—Type of business.
C—Trade association relationships.
D—Form of business ownership.
E—Name of owner or owners.
F—Capital investment.
G—Bonded indebtedness.
H—Type of business organization.
I—Divisions of business.
J—Departments of business.
K—Personnel of business.
L—Wishes and desires of the company's officers and executives.
M—Nature of departmental transactions.
N—Inventory control features.
O—Expense control features.
P—Labor control features.
Q—Cash control features.
R—Accounts receivable control features.
S—Notes receivable control features.
T—Securities owned control features.
U—Equipment and property control features.
V—Cost control features.
W—Budgetary control features.
X—Accounting department control features.

Information on many items not listed on the questionnaire will be recorded in the note book of the person who makes the preliminary study of the business. The questionnaire will not provide sufficient space for recording the necessary information in detail. References to the note-book pages on which supplementary data are recorded will be made in the questionnaire.

The system designer is aware of the purpose of his survey. Therefore the nature of the preliminary study required is known before the task is undertaken. The information may be gathered for the purpose of a system installation in a newly organized enterprise, or it may be collected for a going concern.

60. Data Collected from Preliminary Study of a Newly Organized Enterprise. In the absence of a going concern where operations are in progress, all possible information will be collected from competitive enterprises. The information will pertain to departmentalization, operations, transactions, forms, records, and other data that may prove of use in designing the proposed accounting system. Trade association literature will be read. This often consists of monthly or quarterly journals and a year-book explaining certain basic principles of operation and accounting.

In order that the proper persons may be specified and suitable accounts may be selected to handle the transactions pertaining to the sale of capital stock and bond issues, the promoters will be consulted with respect to the capitalization. The promoters, executive officers, departmental heads, foremen, and other key

men will be questioned with respect to departmentalization, operations, transactions, and other data pertinent to the development of a system.

All the data obtained will be entered in the questionnaire or in the notebook of the investigator. All of the information in whatever form collected will be brought together so that it may be reviewed preparatory to the outlining of a plan.

61. Data Collected from Preliminary Study of an Established Enterprise. The going concern in which a study is made preparatory to establishing a new accounting system will provide a good workshop for the system designer. He will be able to obtain first-hand information on all operations and problems related to the accounting activities. The divisional, departmental, and personnel organizations will be studied in operation and the wishes and desires of the company executives learned.

The departmental operations and the transactions resulting from the operations will be closely inspected. The internal check features will be examined and notes respecting their improvement will be made. The mechanical appliances used will be listed. All the forms in use will be collected and the manner in which they are handled will be recorded. A complete list of the books of account will be made and the classification of accounts used learned. Copies of the statements and statistical reports will be obtained and a record made showing for whom and when they are prepared.

An opportunity will be afforded the system man to study, at close range, all the factors, problems, and details of the going concern. All the information obtained in the questionnaire and the notes will be reviewed later to ascertain the good and bad features of the present system. Trade association literature and competitive concerns may be studied with a view to conforming with the best practices or with a standard system.

The details collected in the system study of the going concern will result in an orderly classification of information chiefly in the questionnaire form. This will be summarized preparatory to review, for the purpose of outlining a preliminary draft of the proposed accounting system.

62. Review of All Preliminary Data Collected.—In reviewing the data collected by the preliminary study there are at least five factors that should be constantly kept in mind. These are:

(*a*) The interrelationship among the various divisions and departments as expressed by the accounts, records, books, and reports.

(*b*) The internal check features among the various divisions and departments as expressed by the responsibilities assigned to certain individuals.

(*c*) The mechanical appliances needed to effect the proper measure of economy in accounting operations and time saving in preparing statements and reports.

(*d*) The nature of the accounting statements and statistical reports needed by the executives, and the frequency with which they are required.

(*e*) The necessity for a *simple* system that will furnish the desired results.

When ready to begin the development of an accounting system, the designer will have before him his filled-out questionnaire and all the notes that he has collected on the proposed system. These taken together will constitute a written record of all the details and allow a mental picture of the entire situation to be formed. He should always take time to form such a picture before beginning to write or draft the detailed plans. Suggestions and requests of company officials, standard trade practices, and previous experience of the system designer all should be taken into account; and all points that may be represented in the system should be appraised and evaluated as to their good and bad characteristics, before decision is made as to what should be incorporated in the system and what should be excluded.

63. Method of Outlining the System Plan.—After a sufficiently detailed review has been made of the data collected, the designer should proceed to outline his plan. The size of the business for which the system is to be developed naturally determines the method of preparing the outline of the system. A system for a small concern, without any unusually intricate problems, may be outlined by enumerating the forms to be used, the journals to be adopted, and the accounts required.

A system for a medium-sized establishment or a large organization requires a more comprehensive outline. A detailed outline is necessary in order to develop a system with the proper balance, and to prevent the overlooking of important details.

The outline of a plan for an ordinary accounting system can be divided logically into seven steps. The steps to be followed in the development of an accounting system are here listed, and then described in detail.

(*a*) A departmental and personnel chart.

(*b*) A chart showing the records originating in each department.

(*c*) A chart illustrating the registers, journals, and ledgers to be used.

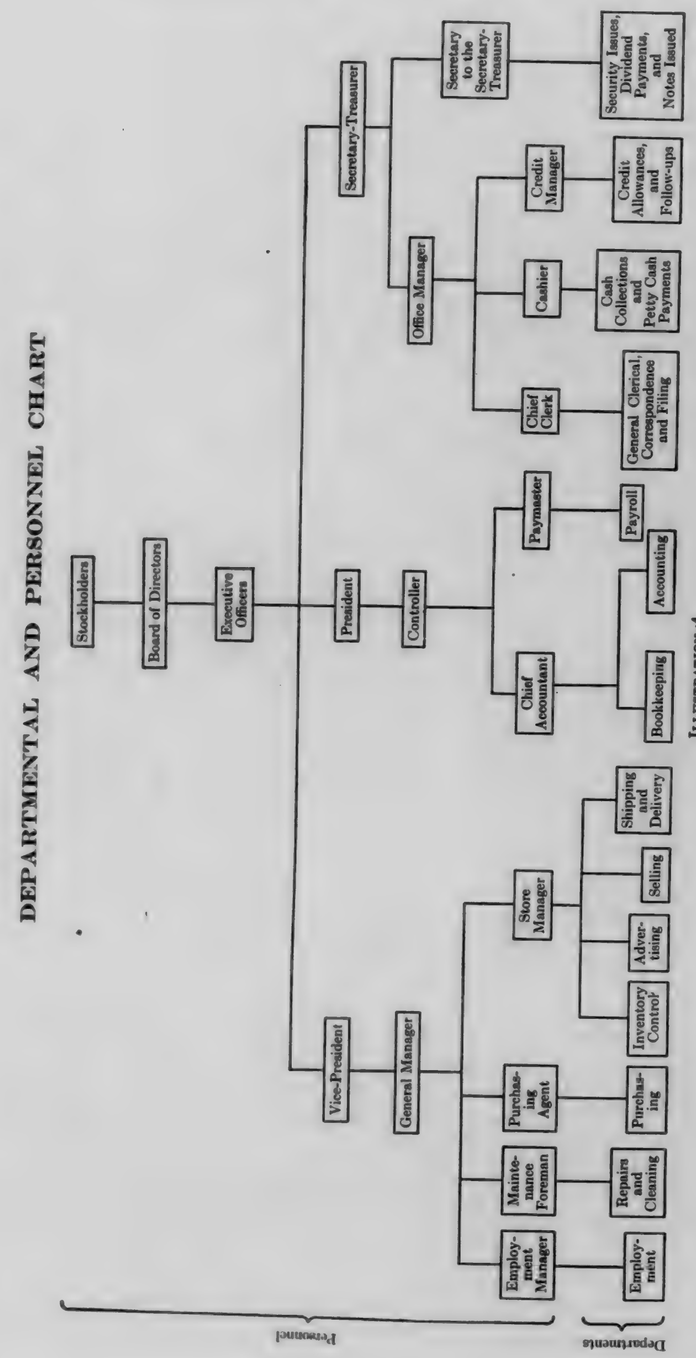
(*d*) A chart of accounts with their code numbers.

(*e*) Charts illustrating the internal checks to be operated.

(*f*) A chart showing the mechanical appliances to be used.

(*g*) A chart showing the accounting statements and statistical reports to be prepared.

There may be additional charts prepared for some systems, as for example, a cost-control chart, a branch-house control chart, a budgetary control chart, etc. The seven steps listed are of a general nature, and apply to practically any type of system.



DEPARTMENTAL AND PERSONNEL CHART

ILLUSTRATION 4

CHART OF RECORDS ORIGINATING WITHIN DEPARTMENTS

Employment	Repairs and Cleaning	Purchasing	Inventory Control	Selling	Shipping and Delivery	Bookkeeping
Job Application Job Specification Personnel Record Late and Absentee Record Resignation and Discharge Record	Daily Time Ticket	Request for Price Quotations Purchase Order	Purchase Requisition Receiving List Merchandise Stock Card	Cash Sales Slip Charge Sales Slip C. O. D. Sales Slip Customer's Credit Memorandum for Sales Returns and Allowances	Daily Truck Record Driver's Package Sheet Express Receipt Bill of Lading	Monthly Statements

Accounting	Payroll	General Office	Cashier	Credit	Treasury
Voucher or Voucher Check Departmental Expense Distribution Sheet Perpetual Inventory Valuation Record Departmental Wage Distribution Sheet	Payroll Sheet Time Clock Card	Petty Cash Vouchers Outgoing Local Telephone Record Outgoing Long Distance Telephone Record Outgoing Telegram Record Record of Cash Received by Mail	Cash Register Daily Cash Count Daily Cash Register Receipts Reading Cash Received on Account Daily Deposit Slip	Approval for Credit Lease Contract	Record of Stockholders Dividend Payment Record Record of Notes Issued Record of Notes Received Daily Record of Checks Issued Voucher Index of Creditors

ILLUSTRATION 5

The charts shown in Illustrations 4 to 20 inclusive are representative of the type of charts that are extremely helpful in the designing of an accounting system. The illustrations cover the development of an accounting system for a retail merchandising store dealing in two classifications of goods, each selling at a different rate of gross profit. This accounts for the departmentalization of the purchases, sales, inventories, and other items having an effect upon the gross profit.

64. Departmental and Personnel Organization Chart.—The organization chart is prepared for the purpose of identifying the responsible head of each division and department, and to show the relationship of the divisions and departments of the enterprise. It likewise sets forth the structure upon which the accounting system is to be built. A sample organization chart is shown in Illustration 4.

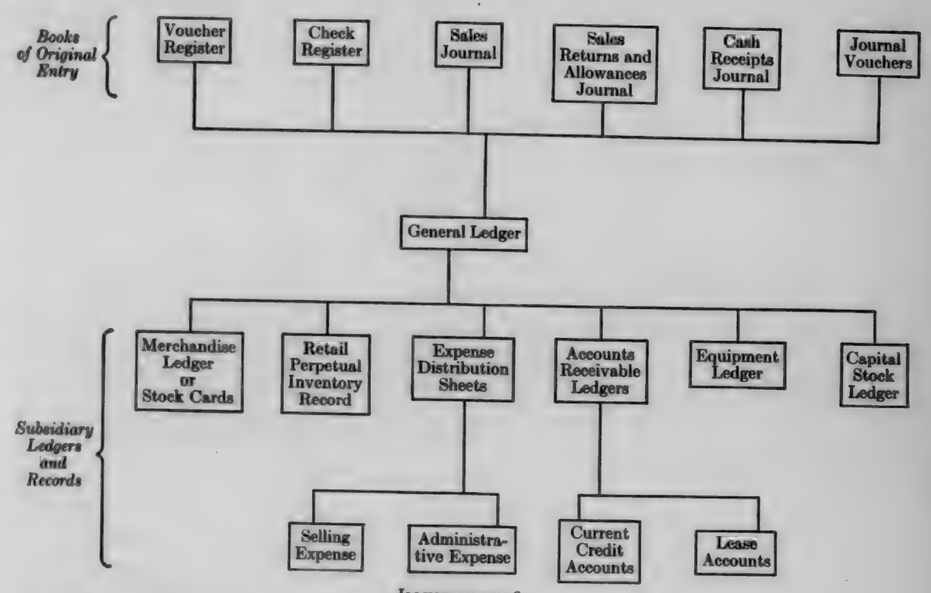


ILLUSTRATION 6

65. Original Records Chart.—The chart shown in Illustration 5 is prepared for the purpose of listing the forms required to record the transactions as they originate within the different departments. The forms listed for use in the employment department, as shown in this illustration, are not of an accounting nature and have no direct effect upon the bookkeeping transactions. This chart will be found useful in the work of developing the internal checks. It is likewise useful in serving as a guide in drawing up the forms from which printed copies are made for use when the system is placed in operation.

66. Chart of Books of Original Entry and Secondary Entry.—The chart shown in Illustration 6 itemizes the books required for the accounting system, and

CHART OF ACCOUNTS WITH CODE NUMBERS

1000 Assets
- 1100 Current Assets
  - 1101 Cash in Bank
  - 1102 Cash Change Fund
  - 1103 Cash Advance Fund
  - 1104 Petty Cash Fund
  - 1105 Notes Receivable
    - 11050 Notes Receivable Discounted
  - 1106 Accounts Receivable
    - 11060 Reserve for Bad Debts
  - 1107 Accounts Receivable, Lease (Separate account for each year)
    - 11070 Reserve for Bad Debts, Lease
  - 1111 Merchandise Inventory, Department 1
  - 1112 Merchandise Inventory, Department 2
  - 1113 Repossessed Goods Inventory
  - 1120 Interest Receivable
  - 1121 Commissions Receivable
- 1200 Deferred Charges to Operations
  - 1201 Prepaid Insurance
  - 1202 Prepaid Advertising
  - 1203 Inventory of Supplies
- 1300 Fixed Assets
  - 1301 Land
  - 1302 Building
    - 13020 Reserve for Depreciation, Building
  - 1303 Store Equipment
    - 13030 Reserve for Depreciation, Store Equipment
  - 1304 Office Equipment
    - 13040 Reserve for Depreciation, Office Equipment
  - 1305 Delivery Trucks
    - 13050 Reserve for Depreciation, Delivery Trucks

2000 Liabilities
- 2100 Current Liabilities
  - 2101 Notes Payable
  - 2102 Accounts Payable
  - 2111 Interest Payable
  - 2112 Dividends Payable
  - 2113 Reserve for State Taxes
  - 2114 Reserve for Compensation Insurance
  - 2115 Reserve for Federal Income Taxes
- 2200 Deferred Credits to Operations
  - 2201 Deferred Gross Profit on Lease Sales (Separate account for each year)
- 2300 Long Term Liabilities
  - 2301 Bonds Payable

3000 Proprietorship
- 3001 Unissued Common Capital Stock
- 3002 Unissued Preferred Capital Stock
- 3011 Common Capital Stock
- 3012 Preferred Capital Stock
- 3100 Earned Surplus

4000 Incomes, Operating
- 4001 Sales, Department 1
- 4002 Sales, Department 2
- 4010 Lease Sales, Department 1
- 4031 Sales Returns and Allowances, Department 1
- 4032 Sales Returns and Allowances, Department 2
- 4050 Profit Earned on Lease Sales

5000 Expenses, Operating
- 5100 Merchandise Cost
  - 5101 Purchases, Department 1
  - 5102 Purchases, Department 2
  - 5131 Purchase Returns and Allowances, Department 1
  - 5132 Purchase Returns and Allowances, Department 2
  - 5161 In Freight and Cartage, Department 1
  - 5162 In Freight and Cartage, Department 2
- 5200 Purchasing and Inventory Handling Expense
  - 5201 Purchasing Department Salaries
  - 5202 Merchandise Handlers' Wages
  - 5211 Office Expense
  - 5213 Postage
  - 5214 Telephone and Telegraph
  - 5215 Power
  - 5216 Heat
  - 5217 Water
  - 5218 Compensation Insurance
  - 5221 Depreciation, Equipment
  - 5222 Depreciation, Building
  - 5231 Repairs and Maintenance, Equipment
  - 5232 Repairs and Maintenance, Building
  - 5241 Insurance, Equipment
  - 5242 Insurance, Building
  - 5250 Miscellaneous Expense
  - 5290 General Administrative Expense
- 5300 Selling Expenses
  - 5301 Salaries
  - 5302 Shipping Department Wages
  - 5303 Drivers' Wages
  - 5309 Stores Supplies
  - 5310 Shipping Supplies
  - 5311 Office Expense
  - 5312 Delivery Truck Supplies
  - 5314 Telephone and Telegraph
  - 5316 Heat
  - 5318 Compensation Insurance
  - 5319 Delivery Truck Repairs
  - 5321 Depreciation, Equipment
  - 5322 Depreciation, Building
  - 5323 Depreciation, Delivery Trucks
  - 5331 Repairs and Maintenance, Equipment
  - 5332 Repairs and Maintenance, Building
  - 5341 Insurance, Equipment
  - 5342 Insurance, Building
  - 5343 Insurance, Delivery Trucks
  - 5350 Miscellaneous Expense
  - 5360 Advertising
  - 5361 Freight and Express Out
  - 5390 General Administrative Expense
- 5400 Administrative Expenses
  - 5401 Salaries, Officers
  - 5402 Salaries, General Clerical
  - 5403 Salaries, Accounting
  - 5404 Wages, Repairmen and Cleaners
  - 5411 Expenses, General Clerical
  - 5412 Expenses, Accounting
  - 5413 Postage
  - 5414 Telephone and Telegraph
  - 5416 Heat
  - 5417 Water
  - 5418 Compensation Insurance
  - 5421 Depreciation, Equipment
  - 5422 Depreciation, Building
  - 5431 Repairs and Maintenance, Equipment
  - 5432 Repairs and Maintenance, Building
  - 5441 Insurance, Equipment
  - 5442 Insurance, Building
  - 5450 Miscellaneous Expense
  - 5470 Taxes, Real Estate

5500 Income Deductions
- 5501 Interest Expense
- 5502 Sales Discount
- 5503 Bad Debts

4200 Other Income
- 4201 Interest Earned
- 4202 Scrap Sales
- 4203 Purchase Discount
- 4204 Bad Debts Recovered

6000 Closing Accounts
- 6001 Profit and Loss

ILLUSTRATION 7

INTERNAL CHECK FOR MERCHANDISE INVENTORY

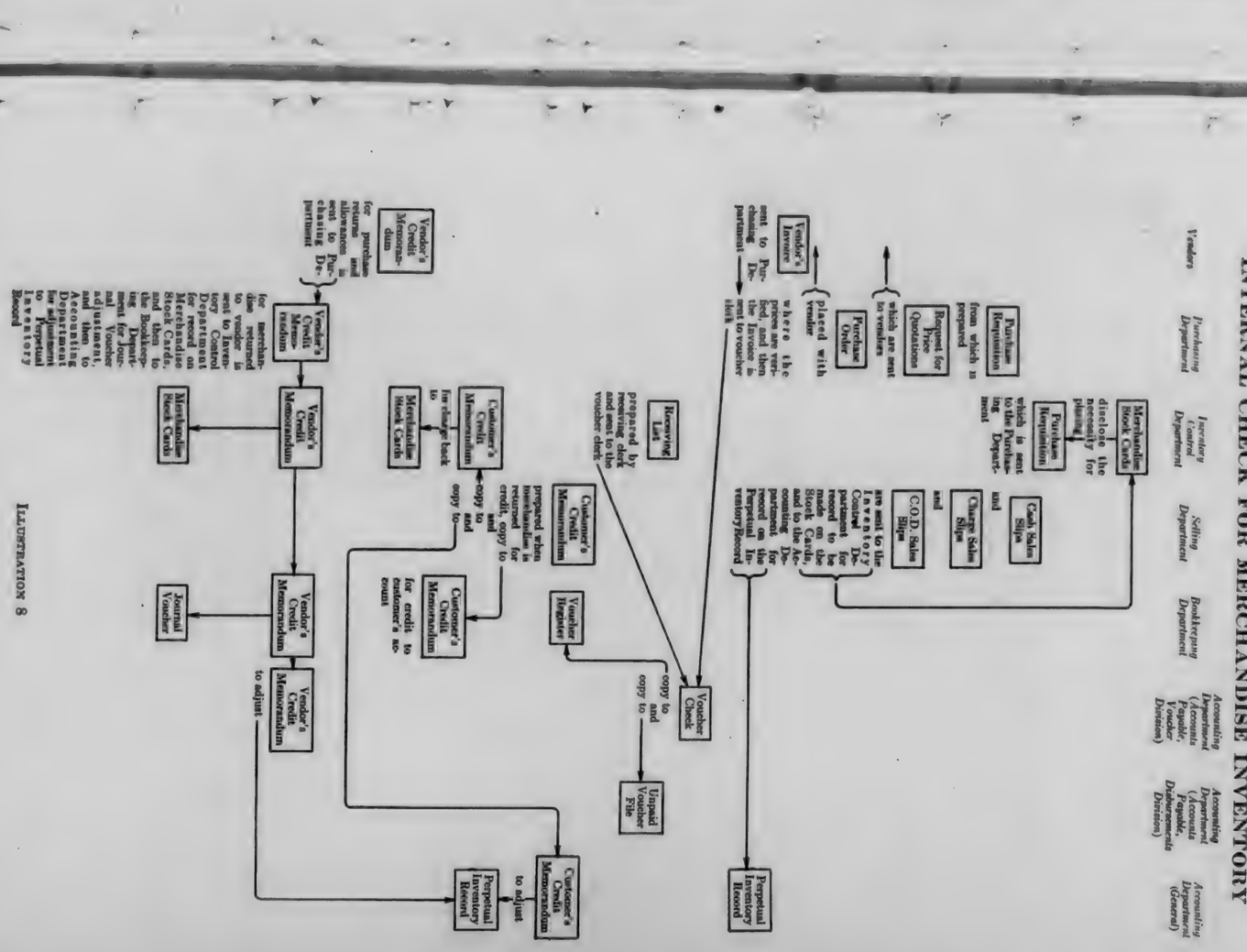


ILLUSTRATION 8

INTERNAL CHECK FOR EXPENSES

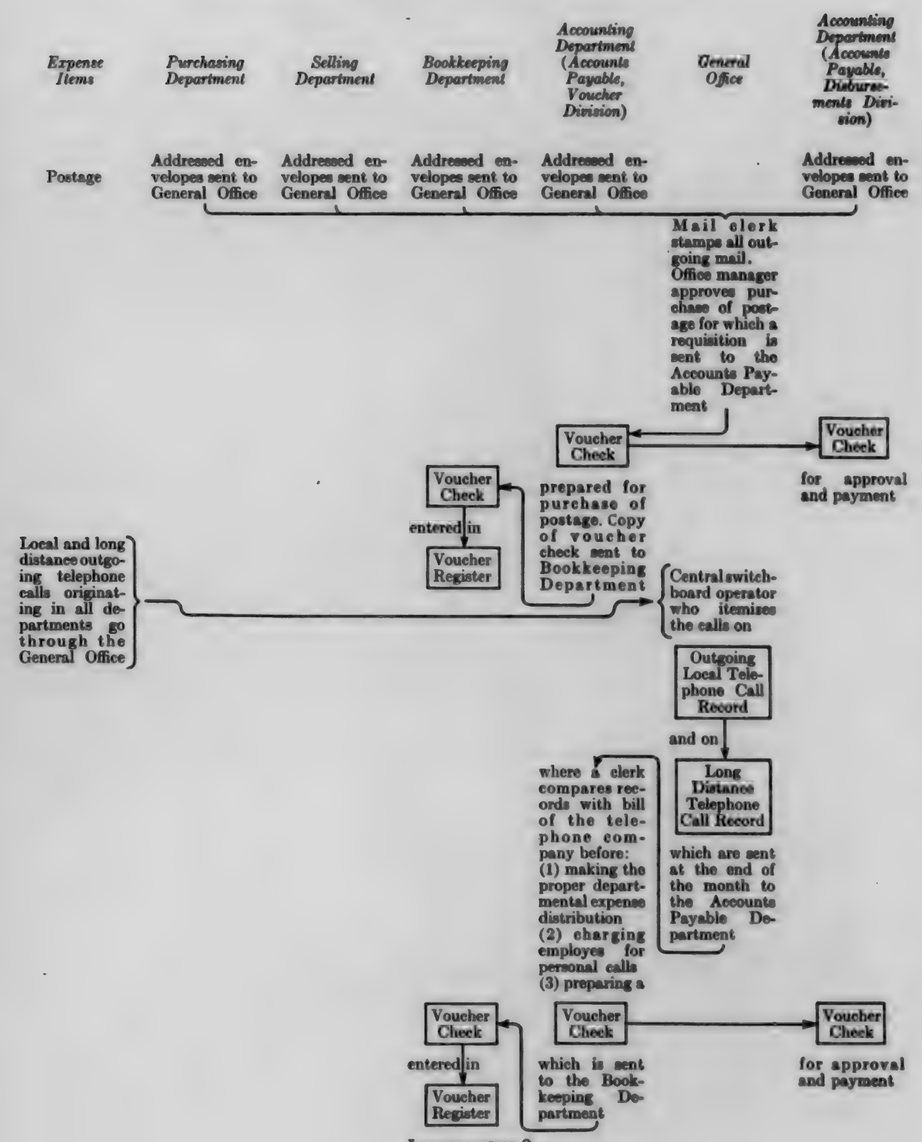


ILLUSTRATION 9

INTERNAL CHECK FOR CREDIT EXTENSION AND LEASE SALE CONTRACTS

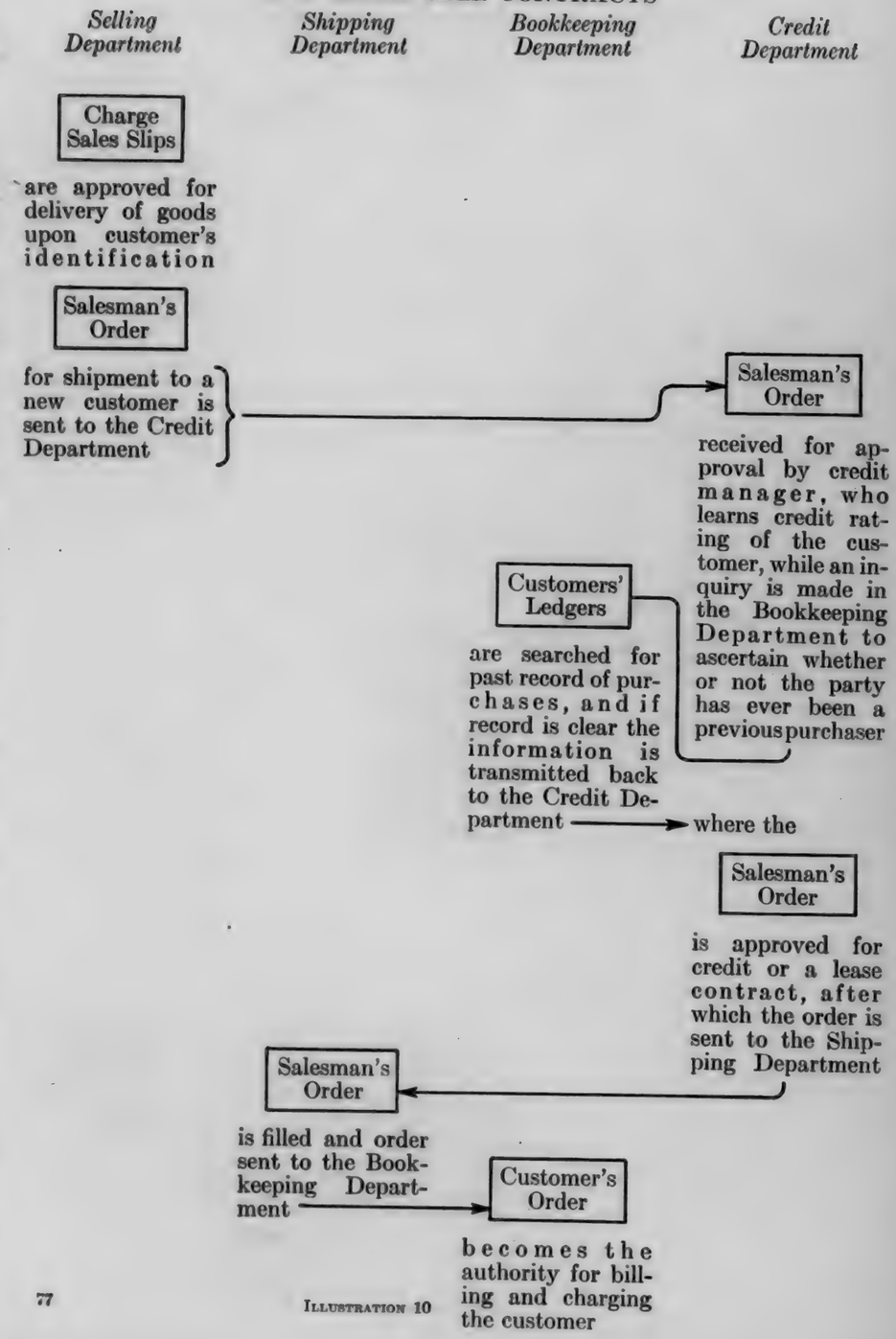


ILLUSTRATION 10

INTERNAL CHECK FOR PAYROLL

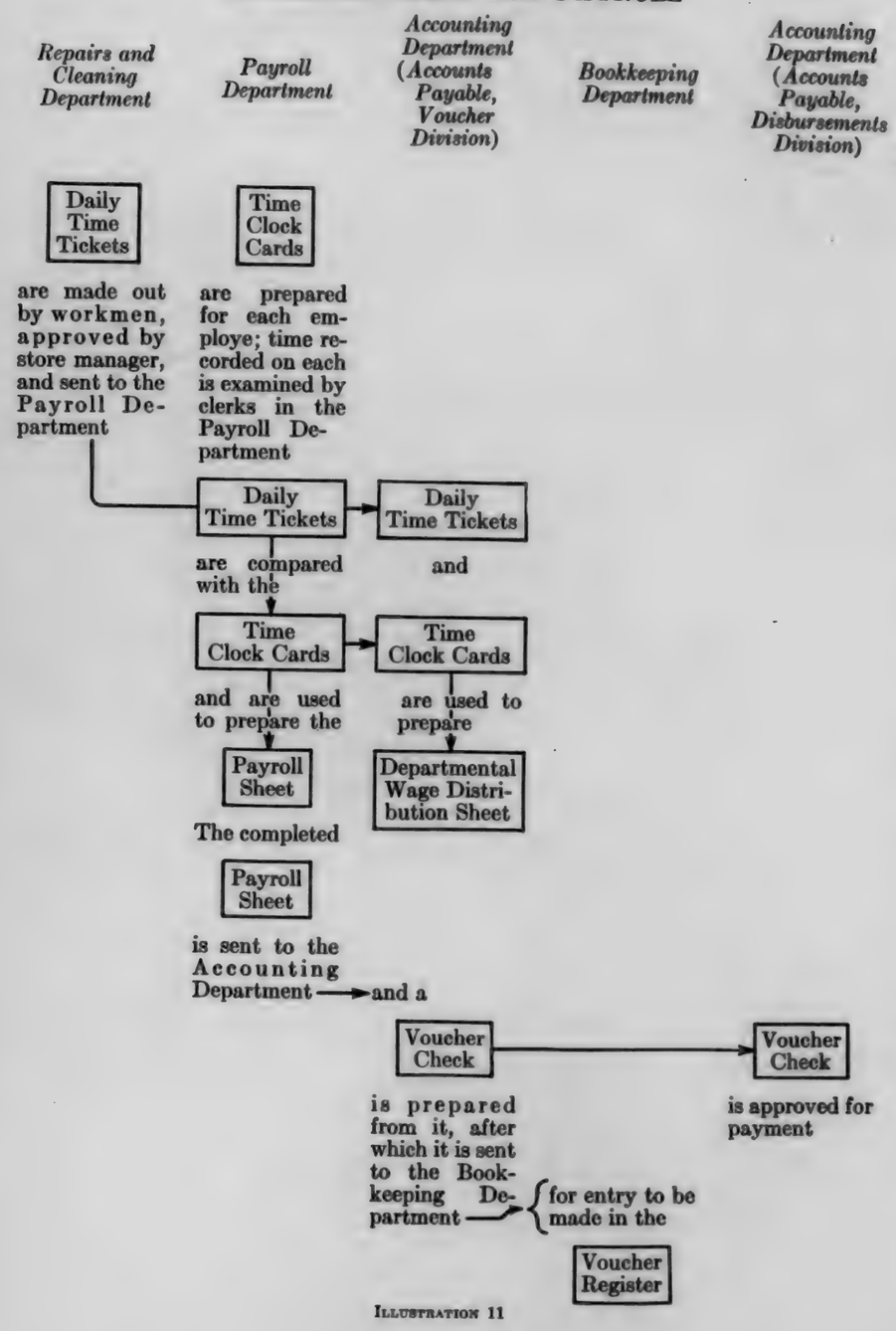


ILLUSTRATION 11

INTERNAL CHECK FOR CASH RECEIPTS FROM CASH SALES AND C.O.D. SALES

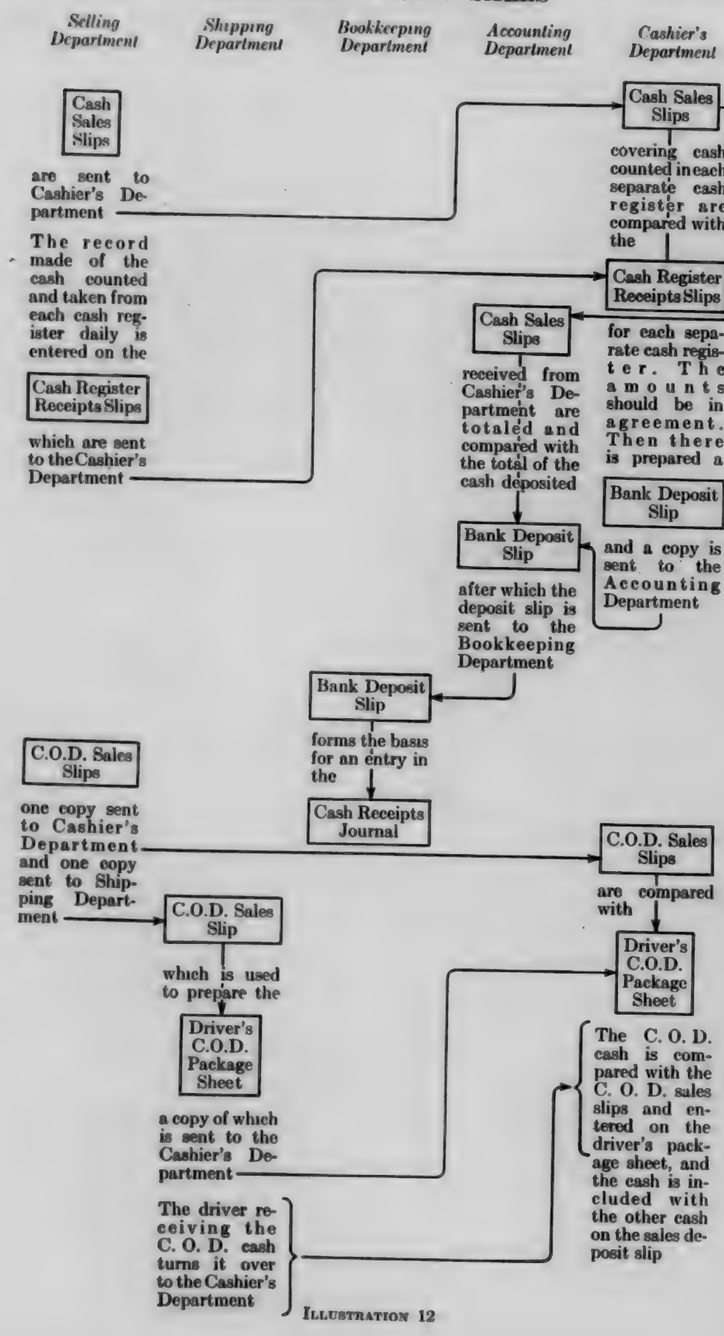


ILLUSTRATION 12

INTERNAL CHECK FOR CASH RECEIVED FROM CUSTOMERS AND OTHER SOURCES

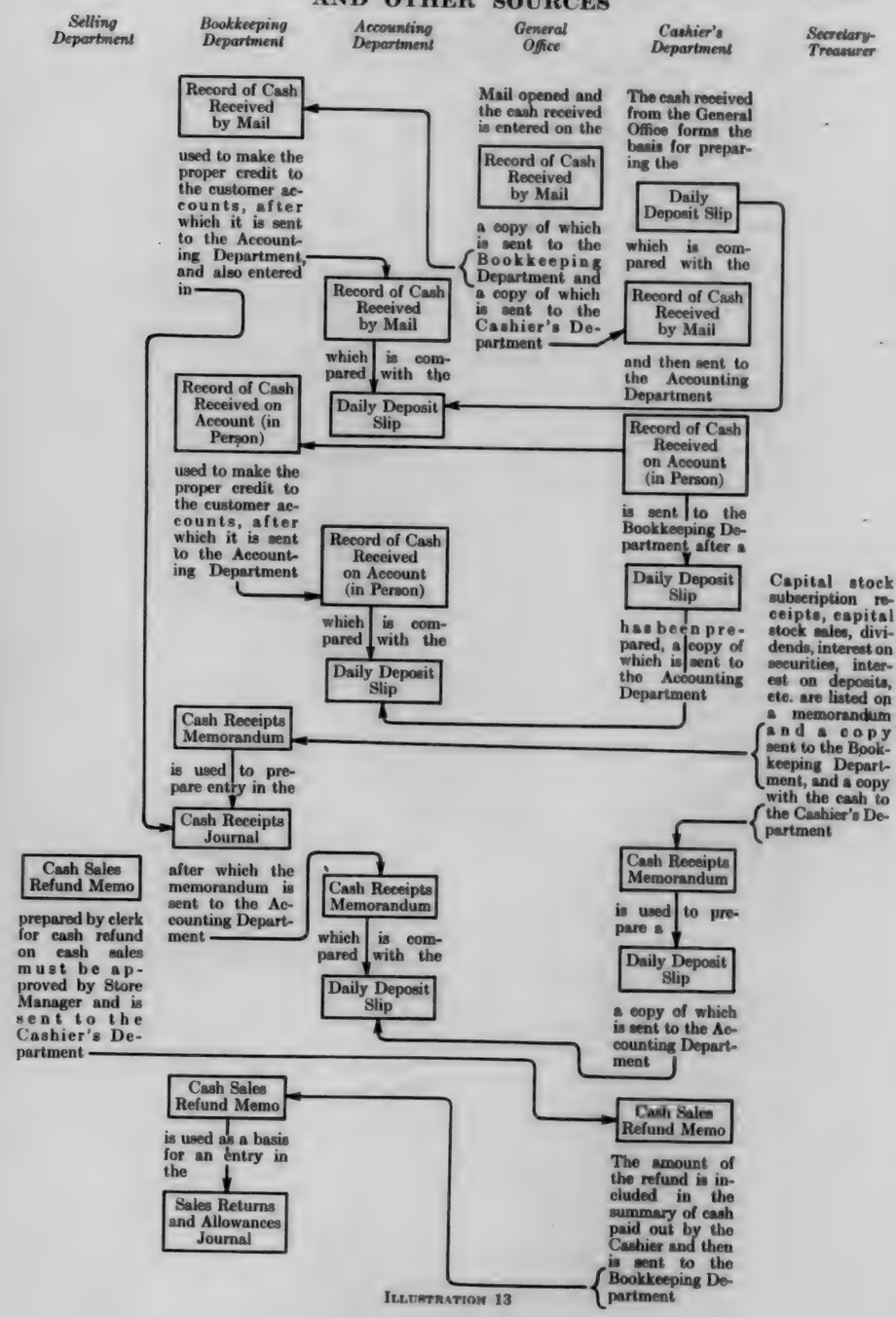


ILLUSTRATION 13

INTERNAL CHECK FOR CASH DISBURSEMENTS

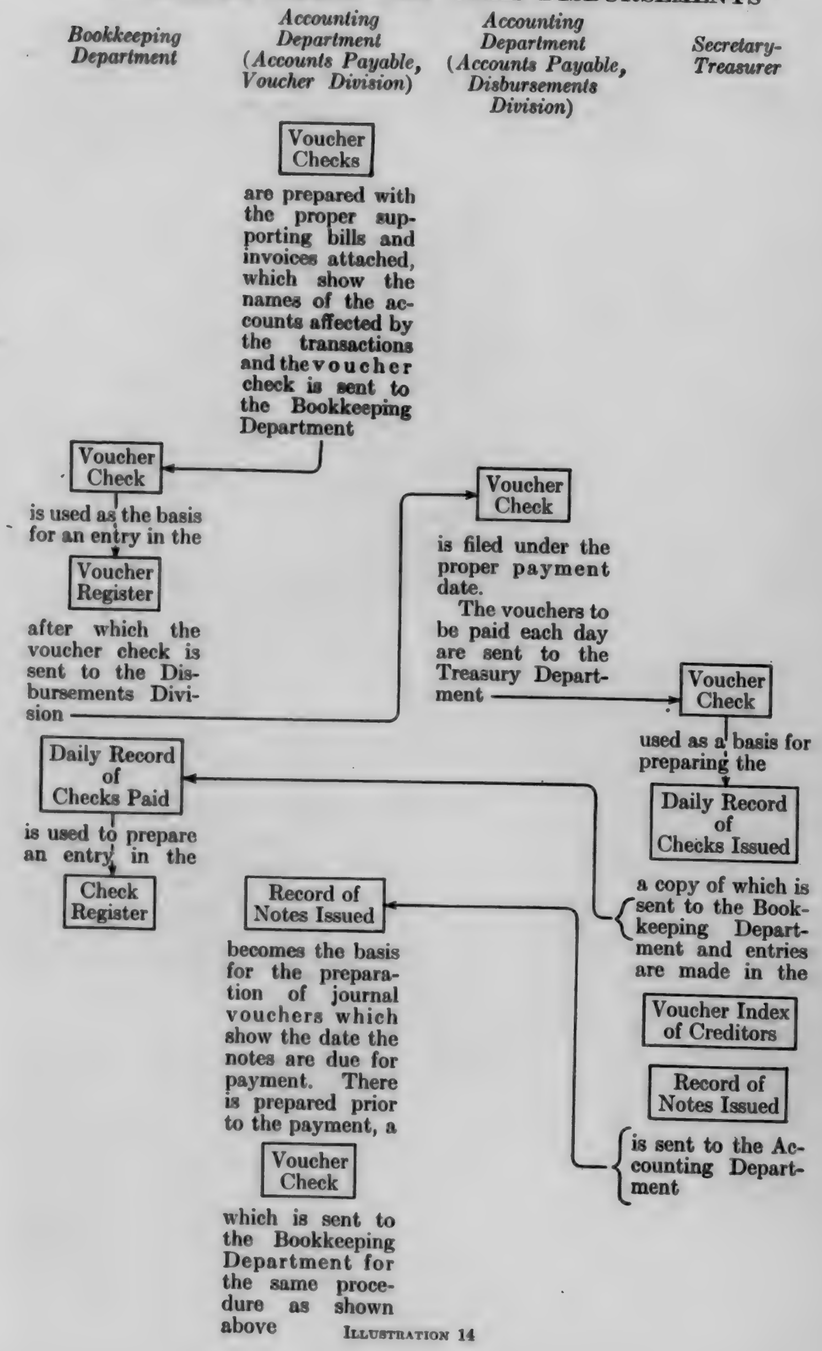


ILLUSTRATION 14

INTERNAL CHECK FOR PETTY CASH

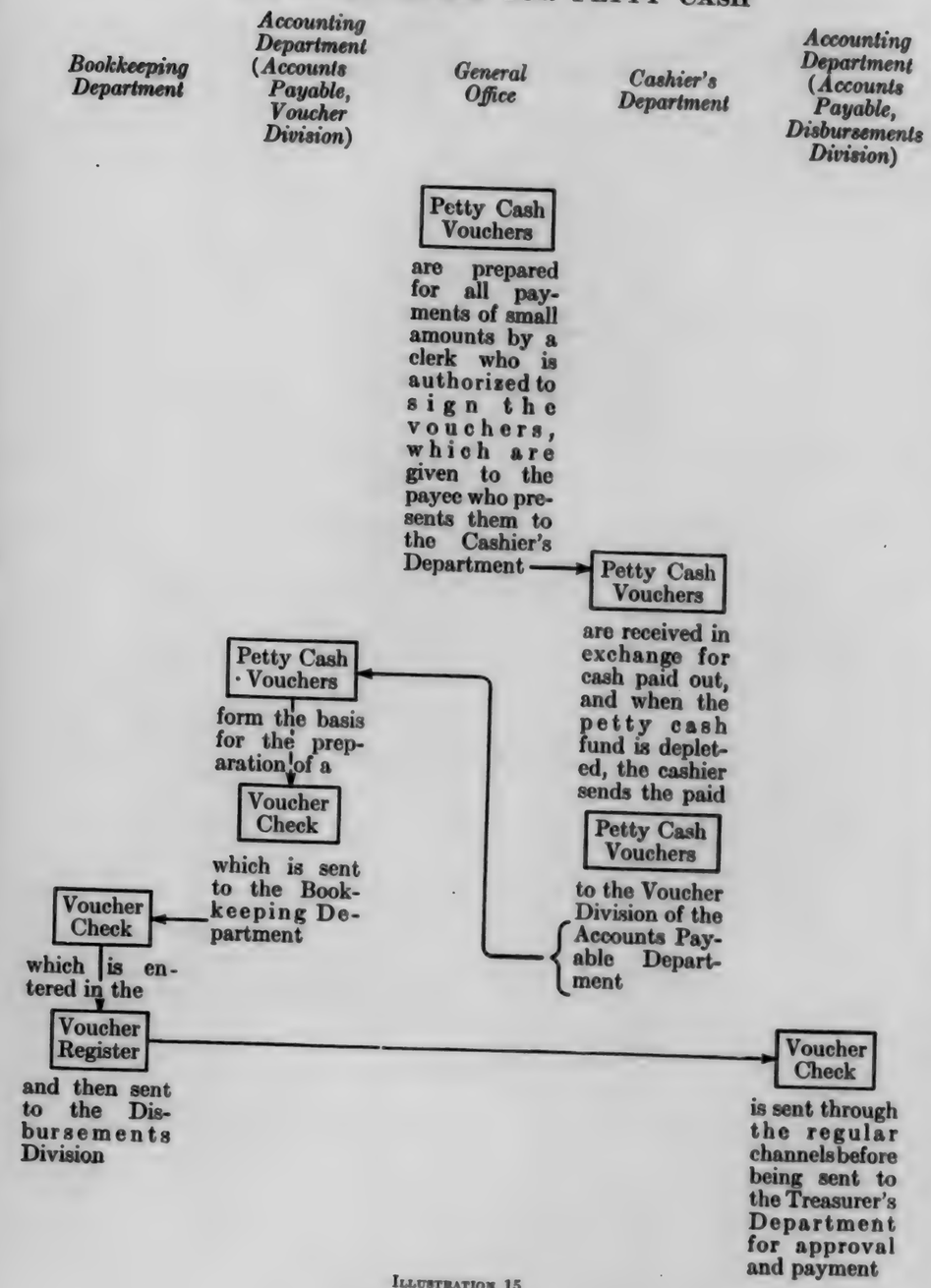


ILLUSTRATION 15

INTERNAL CHECK FOR ACCOUNTS RECEIVABLE

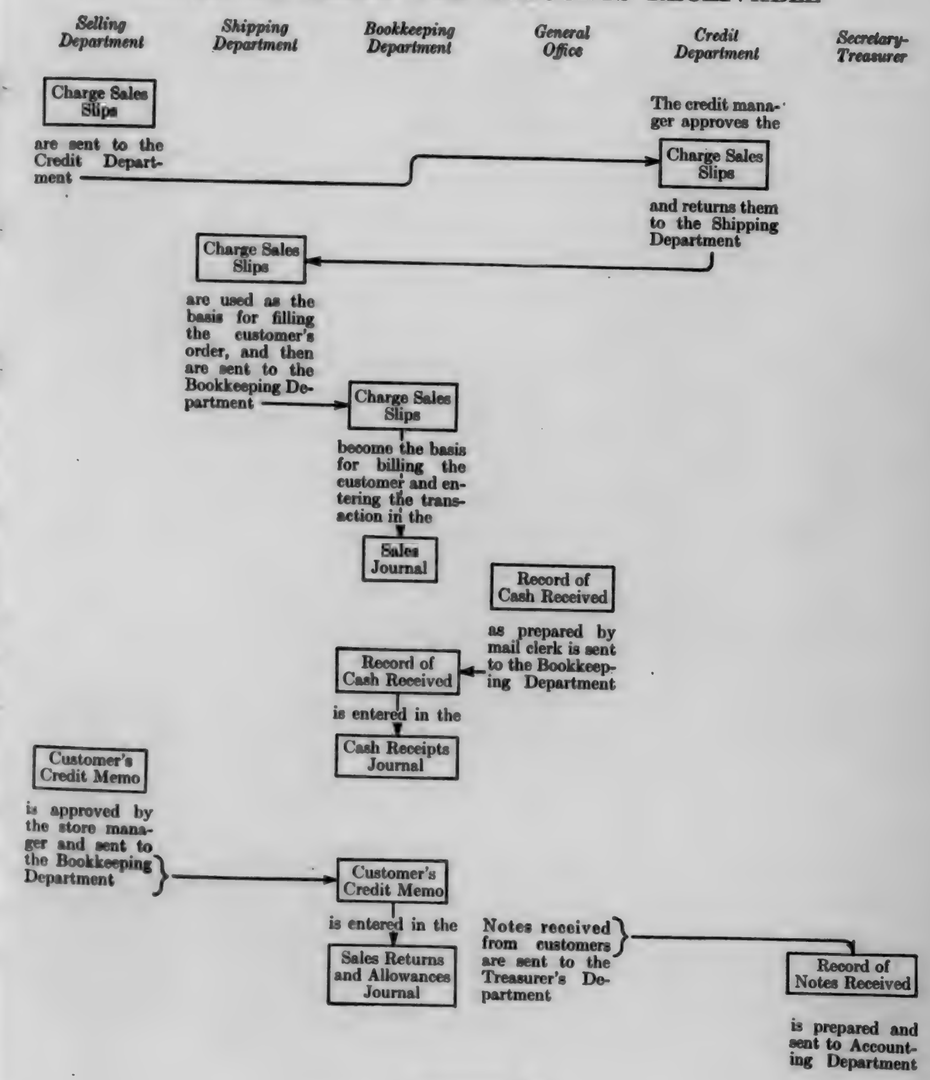


ILLUSTRATION 16

INTERNAL CHECK FOR NOTES RECEIVABLE

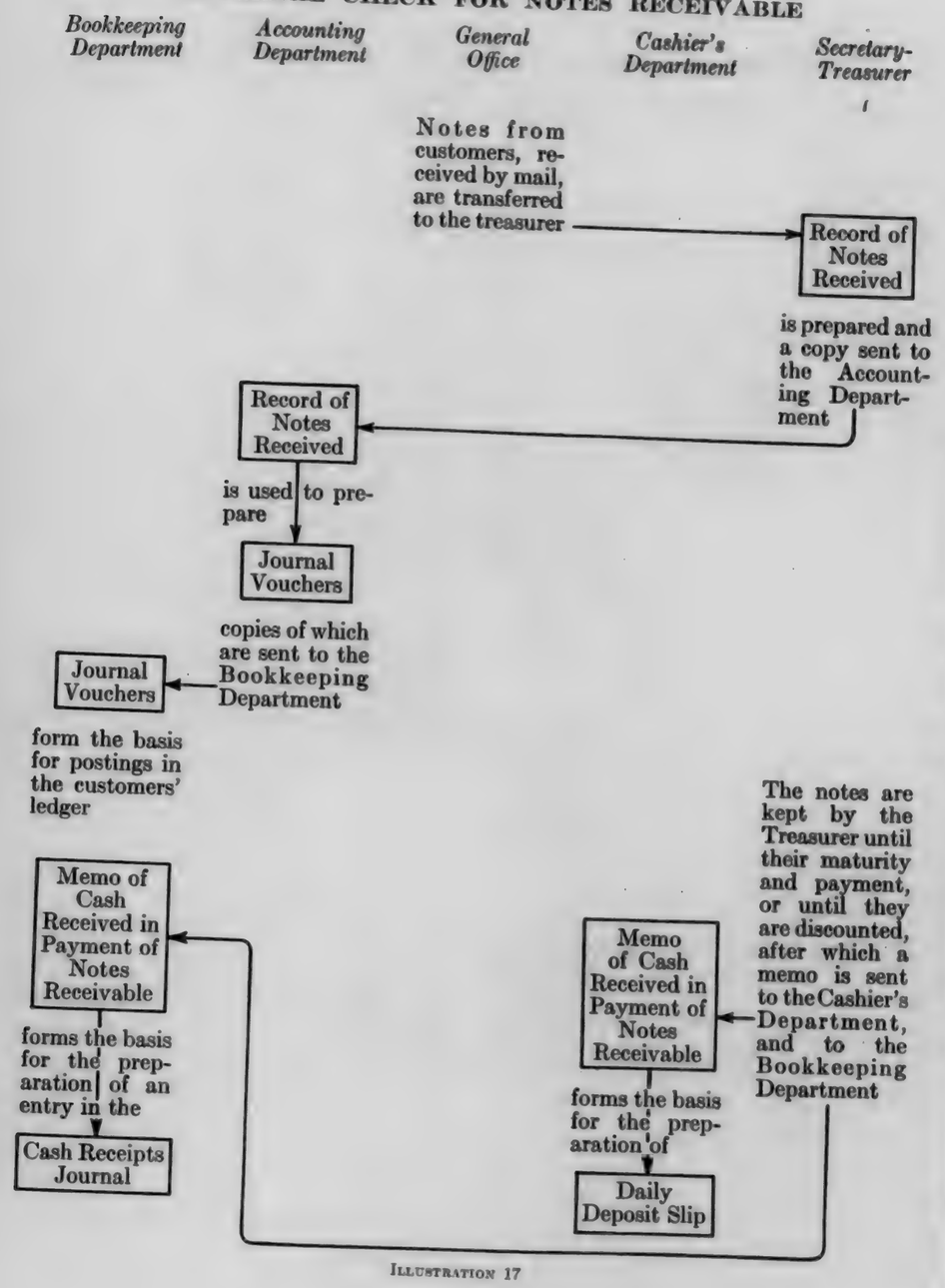


ILLUSTRATION 17

INTERNAL CHECK FOR CAPITAL STOCK CERTIFICATES

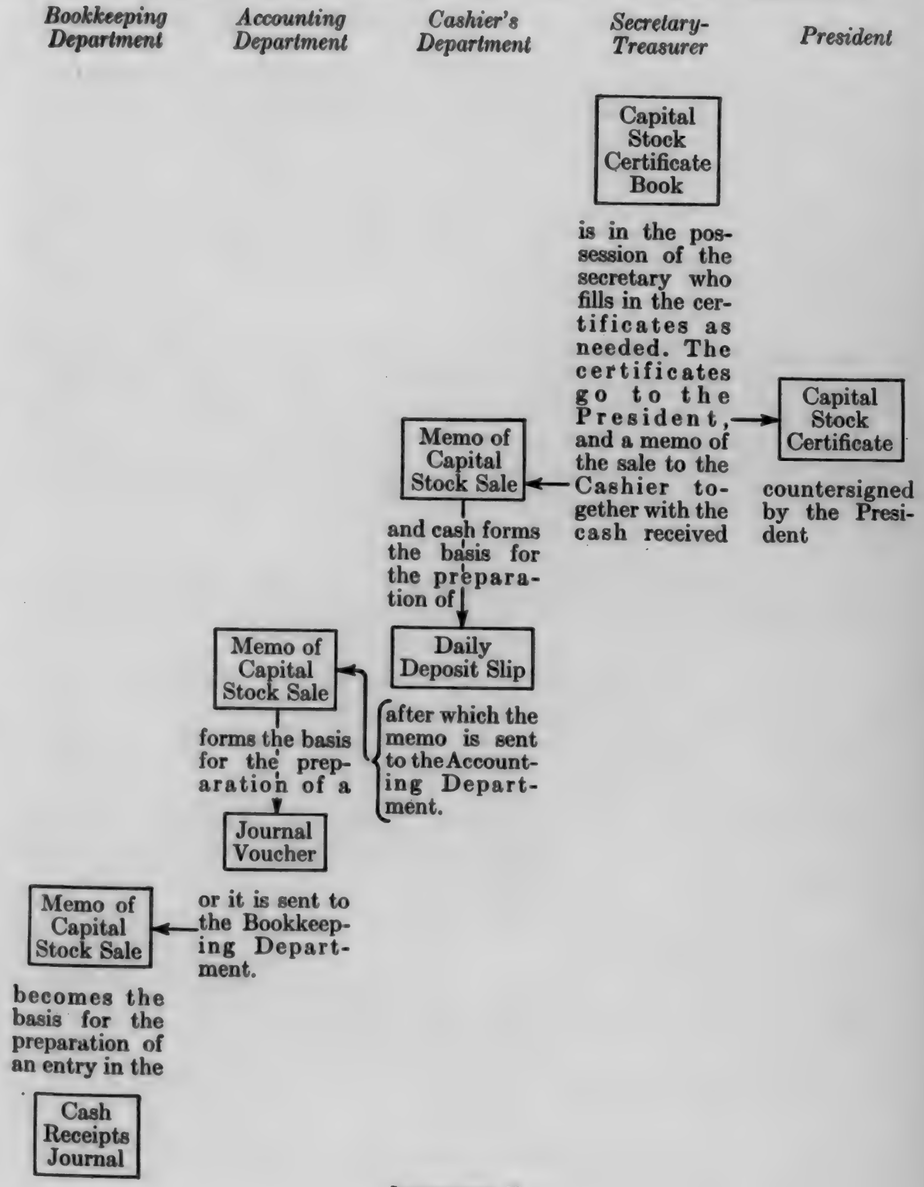


ILLUSTRATION 18

serves as a memorandum for use in the development of the necessary journal and ledger forms described in subsequent chapters. The books of original entry and secondary entry are further described in Chapters X and XI.

67. Chart of Accounts and Code Numbers.—Illustration 7 shows the complete classification of accounts which are to be used in the system together with their code numbers. The classification of accounts must be well-near perfect before the system is placed into operation, especially if a code system is used. Therefore, every conceivable account that may be used must be anticipated. This chart aids in setting up the general ledger, in determining the control accounts, and in naming the columnar headings in the various journals. Accounts are discussed in detail in Chapter IX.

68. Charts for the Internal Checks.—The illustrations numbered from 8 to 18 inclusive list in detail the departments affected by each internal check, together with the original records involved in the operation of the internal checks. These charts are particularly helpful in testing the adequacy of the various internal checks. They also furnish a very clear method of portraying to the executives of the concern, in which the system is installed, the manner in which the checks function.

69. Chart of Mechanical Office Appliances.—The chart, Illustration 19, is a memorandum of the mechanical equipment required for use in accordance with the

CHART OF MECHANICAL APPLIANCES REQUIRED

Purchasing Department	Selling Department	Bookkeeping Department	Accounting Department	Payroll Department	Cashier's Department
Adding Machine		Adding Machine	Adding Machine	Adding Machine	Adding Machine
Calculating Machine		Calculating Machine	Calculating Machine	Calculating Machine	
		Addressing Machines			
	Cash Registers				Cash Registers
				Time Clock	
Filing Equipment	Filing Equipment	Filing Equipment	Filing Equipment	Filing Equipment	Filing Equipment
		Bookkeeping Machines	Bookkeeping Machines		

ILLUSTRATION 19

number of specified transactions of various types, which originate within the departments, as ascertained from the preliminary study.

70. Chart of Accounting Statements and Statistical Reports.—Illustration 20 itemizes the statements and reports to be prepared monthly and annually. The

number of items appearing on such a chart depends upon the nature and size of the business, the system designer's idea of the required number of statements and reports, and the executives' wishes.

CHART OF ACCOUNTING STATEMENTS AND STATISTICAL REPORTS TO BE PREPARED

Accounting Statements		Statistical Reports	
Prepared Monthly	*Prepared Annually*	*Prepared Monthly*	*Prepared Annually*
Profit and Loss Statements: (1) Cumulative detailed for year to date (2) Comparative detailed for each month of year to date (3) Condensed comparative for each month, and cumulative to date with percentage analysis	Profit and Loss Statement	The following by departments: (1) Sales Analysis (2) Sales Returns & Allowances Analysis (3) Gross Profit and Percentage Analysis Departmental comparative analyses for: (1) Total Sales (2) Total Cost of Sales (3) Total Gross Profit Merchandise Inventory Turnover Purchase Returns and Allowances Analysis Labor Turnover Delivery Truck Mileage Record Delivery Truck Cost per Mile Net Working Capital and Ratio Analysis of Advertising Space Purchased	
Statement of Surplus	Statement of Surplus		
Balance Sheets: (1) Regular form (2) Comparative by months	Balance Sheet		Summaries for twelve months
			Return Earned on Capital Stock Turnover of Total Capital Used Accounts Receivable Age Analysis

ILLUSTRATION 20

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) In what manner do the data gathered for the purpose of designing an accounting system for a newly organized enterprise differ from the data gathered to be used in revising a system for an established enterprise?

(2) State five factors which the system designer must keep in mind in reviewing the detailed data from which an accounting system is to be designed.

(3) In the design of a comprehensive accounting system, what aids should be made use of in outlining the various phases of the system?

(4) Prepare a departmental and personnel chart for an enterprise for which an accounting system is being designed, wherein the following officers, executives, and departmental heads are employed; show also the activities they oversee:

(*a*) The chairman of the board of directors presides at all meetings of the board of directors. The chairman is the highest officer of the corporation, and he dictates the general policies.

(*b*) The president carries out the general policies established by the board of directors.

(*c*) The first vice-president is in charge of all production activities.

(*d*) The second vice-president is in charge of all marketing activities.

(*e*) The secretary and treasurer is in charge of finance.

(*f*) The controller in addition to being director of accounts is the chief budget officer, and reports direct to the president.

(*g*) The general superintendent has charge of all manufacturing operations, stores, toolroom, and maintenance.

(*h*) The superintendent of the foundry is responsible for all foundry operations.

(*i*) The superintendent of the forge shop is responsible for all activities in this shop.

(*j*) The superintendent of the machine shop is the head of this producing division.

(*k*) The foundry has one general foreman, and a separate foreman in each of the following departments: melting and pouring; patternmaking; coremaking; molding; cleaning.

(*l*) The forge shop has one general foreman, and two assistants, one of whom is in charge of heating, and one of whom is in charge of hammering.

(*m*) The machine shop has one general foreman, and five assistants, each of whom is in charge of one of the following operations: cutting and drilling; turning and boring; lathe operations; bench work; assembling.

(*n*) The purchasing agent reports to the first vice-president.

(*o*) The storekeeper reports to the general superintendent.

(*p*) The employment manager reports to the first vice-president.

(*q*) The maintenance department foreman reports to the general superintendent.

(*r*) The toolroom foreman reports to the general superintendent.

(*s*) The chief engineer is in general charge of production design, output, and equipment, and he reports to the first vice-president. Three other engineers are each in charge of one of the following branches, respectively: research and development; planning and production; mechanical equipment; and they report to the chief engineer.

(*t*) The general sales manager reports to the second vice-president, and is in charge of two district sales managers, who in turn supervise twenty salesmen each. The general sales manager also supervises the chief clerk in the sales office.

(*u*) The advertising manager reports to the general sales manager.

(*v*) The traffic manager reports to the general sales manager.

(*w*) The credit manager reports to the second vice-president.

(*x*) The shipping clerk and warehouse foreman report to the sales manager.

(*y*) The cashier reports to the secretary-treasurer.

(*z*) The plant auditor reports to the controller.

(*aa*) The paymaster reports to the plant auditor.

(*bb*) The cost accountant reports to the plant auditor.

(*cc*) The general accountant, who supervises the work of the accounts receivable, accounts payable, and all other divisions of accounting work except cost accounting, reports to the plant auditor.

(*dd*) The statistician, who compiles analyses for the cost department, general accounting department, payroll, and sales departments, reports to the plant auditor.

Retain your answers and continue with the study of the next chapter.

CHAPTER VIII

ORIGINAL RECORDS

71. Meaning and Purpose of Original Records.—Original records are forms on which business transactions and other data are recorded for use in the preparation of journal entries, statistical compilations, or for other business purposes. The original records described in this Chapter are used chiefly for journal entry purposes.

The original record used for the assembly of data for journal entry purposes may be an individual record of some accounting transaction, or it may be a monthly summary of a series of transactions. Whatever the nature of the records may be, the principal purpose of their use is to accumulate various types of accounting data in an orderly and systematic fashion. Where business transactions are collected in a systematic manner, the cost of accumulating them is greatly reduced. Another advantage in the use of original records lies in the fact that certain records made in certain departments become the basis for the preparation of the records, reports, or journal entries, in other departments. Thus the preparation of one original record may serve several purposes. The multiple use of original records is an important feature of system building that must not be overlooked.

72. Principles to be Followed in Designing Original Records.—The original records used in the assembling of accounting data are an indispensable aid in the economical operation of an accounting system. Therefore, much thought must be given to the manner in which they are prepared. In the development of an accounting system, the nature and number of original records used depend upon the kind and size of the business for which the system is designed. The preliminary study should disclose the forms required for the system. Some of the commonly used forms are listed in Illustration 5.

The principles to be followed in determining the number and nature of the original records to be used in an accounting system are:

(*a*) Use as few original records as possible.

(*b*) Make use of duplicate copies wherever possible.

(*c*) Avoid overlapping in the gathering of data.

(*d*) Obtain simplicity and conciseness in design.

(*e*) Provide for ease in collecting the data for bookkeeping records.

(*f*) Tie in with the internal checks.

(*g*) Furnish the required information for statistical purposes.

(*h*) Facilitate the making of the annual external audit.

Following are brief comments on the foregoing principles:

(*a*) To use as few original records as possible is a general principle to which there should be strict adherence. This means that there should be no needless records, but it does not mean that the successful operation of the system should be endangered by the failure to use sufficient original records. The number of original records necessary must be determined by the experience and judgment of the system designer, from the requirements disclosed by the preliminary study.

(*b*) In modern accounting systems, much use is made of duplicate carbon copies of various original records. A modern billing machine will simultaneously prepare the customer's invoice, the monthly sales journal record, the ledger record, and the customer's statement. Another illustration of a saving made by using carbon copies of original records is the voucher check. The duplicate shows the account distribution and provides the basis for entry in the voucher register.

Still another illustration of the use of carbon copies of original records to speed up the handling of transactions is found in the preparation of the stores requisition in triplicate. The original requisition is given to the stores department in exchange for the raw materials or supplies, the duplicate is sent to the cost department, and the triplicate is sent to the accounting department. The duplicate copy enables the cost department to obtain the cost of the raw materials on each specific job order. The triplicate copy permits the entries to be made for establishing the proper control account balances. The original is used to record the information in the "issued" column of the stores ledger.

Other multiple forms of original records are time tickets in connection with specific job orders, spoiled-work reports, and sales orders.

(*c*) It is a fundamental principle in the determination of the records to be used in an accounting system, that the records shall be so designed that the same information will not be gathered twice. The data once gathered at its source should be entered on the record so that it serves the purposes of all departments that require the information.

(*d*) An accounting system to be effective and practical must be simple; therefore the original records must be as simple as possible. The design of simple and concise original records will be greatly aided by careful study of the needs of the system in respect to the data to be gathered.

(*e*) The prime purpose of original records is to collect data for classified and permanent recording in various journals and registers. The recording of the transactions so collected is obviously the bookkeeping fucntion. It follows, then, that the greater the care that is taken in designing the original records, the more valuable they will be in the bookkeeping work.

(*f*) A study of Illustration 5, and Illustrations 8 to 18 inclusive shows that the original records are an important part of the various internal checks. The original records must, therefore, be designed with the internal-check phase of the accounting system in mind, since they are such an important part of the internal auditing scheme.

(*g*) When original records are filled in with the information called for, they not only furnish the necessary data for bookkeeping purposes but for statistical reports as well. This fact should be kept in mind when designing the original records.

(*h*) An annual audit, which is generally made in all well managed enterprises, is facilitated by having certain original records on file. The original records that are connected with the internal checks are inspected by the auditors as a part of their examination of the company records.

73. Original Records in General Use.—Thousands of different forms of original records are in use in the accounting systems of the enterprises of the world. The number of records is a result of the diversity of enterprises, and the fact that their accounting systems were designed by different individuals. System designers think individually, and there is no uniformity in the way they have been taught. As a result there is a great variety of records.

There are, however, certain original records of a general nature that are used in many different types of business concerns. The most common ones will be here illustrated and described.

The original records illustrated in this chapter are presented under the departments in which they originate. The departments are purchasing, stores, manufacturing, sales, shipping, timekeeping and payroll, administrative, cashier, credit, treasury, accounting, and personnel. Unless there is some peculiar feature of the original record to be commented upon, no description will be given. Most of the forms are self-explanatory and their use has already been described.

REQUEST FOR PRICE QUOTATIONS

PURCHASING DEPARTMENT No. A1

(This is not an Order)

Pittsburgh, Pa. Jan. 2, 19—

To:
Newark Supply Co.
1110 Main Street
Newark, N. J.

Please quote price on materials itemized below. Submit your price quotation on this form opposite the listed items.

Delivery of materials, if the order is placed with you, must be made on or before Jan. 25, 19—. If this delivery date can not be fulfilled, do not fail to state the fact, and advise the date you can make delivery.

Price quotations must be F. O. B. Pittsburgh, Pa.

Price quotations must be received by us not later than Jan. 9, 19—

Yours truly,

J. H. Coleman
Purchasing Agent

Quantity	Units	Catalogue No.	Description of Items	Price	Discount	Net
100	gross		Hardwater Soap			

ILLUSTRATION 21

74. Purchasing Department Records.—The records originating in the purchasing department and herein described are the:

(*a*) Request for Price Quotations, Illustration 21.

(*b*) Purchase Order, Illustration 22.

PURCHASE ORDER

PURCHASING DEPARTMENT

Purchase Order No. 1001
Purchase Requisition No. 8842
Pittsburgh, Pa. Jan. 10, 19—

To:
Newark Supply Co.
1110 Main Street
Newark, N. J.

Address all communications pertaining to this order to the Purchasing Department.

Please ship to L. M. Moxie Storekeeper the following materials in accordance with your price quotation of Jan. 8, 19— F. O. B. Pittsburgh, Pa.

Mark our purchase order and purchase requisition numbers plainly on each piece or container shipped.

Mail all invoices to the Purchasing Department.

Mail all monthly statements to the Accounting Department.

We reserve the right to cancel this order if delivery is not made upon the date specified.

J. H. Coleman
Purchasing Agent

Quantity	Unit	Catalogue No.	Description of Items	Remarks
100	gross		Hardwater Soap	

ILLUSTRATION 22

The request for price quotations, Illustration 21, is usually prepared in duplicate. The original is sent to the vendor and the duplicate is kept on file in the purchasing agent's office.

The purchase order, Illustration 22, is generally prepared in triplicate. The original is mailed to the vendor, the duplicate is sent to the storekeeper to allow a record of the order of the materials to be placed on the purchase requisition and in the stores ledger, and the triplicate is retained in the purchasing agent's office.

75. Stores Department Records.—Original records prepared in this department are the:

(*a*) Physical Inventory Sheet, Illustration 23.

(*b*) Purchase Requisition, Illustration 24.

(*c*) Receiving List, Illustration 25.

The *physical inventory sheet*, Illustration 23, is used to make periodical check-ups on various stock items, and also for listing the complete annual inventory count.

PHYSICAL INVENTORY SHEET

STORES DEPARTMENT

Sheet No. 1

Jan. 31, 19—

Stock Item No.	Quantity	Units	Description of Items	Unit Price	Amount
847	12½	doz.	#4492 Luzerne Plugs	$1.00 doz.	$12.50
855	3	doz.	#6170 " "	.75 doz.	2.25
				Total	14.75

ILLUSTRATION 23

PURCHASE REQUISITION

STORES DEPARTMENT

Purchase Order No. 1001

Purchase Requisition No. 8842

Pittsburgh, Pa. Jan. 1, 19—

To the Purchasing Agent:

Please order for Stores stock the following materials and supplies, and have shipped at once ~~within _____ days~~, via Parcel Post ☐ Express ☐ Freight ☒

L. M. Moxie
Storekeeper

Store Item Number	Quantity	Unit	Catalogue No.	Description of Items	Received
1912	100	gross		Hardwater Soap	

ILLUSTRATION 24

The *purchase requisition*, Illustration 24, is usually made out in duplicate, the original being sent to the purchasing agent and the duplicate being retained on file in the stores department.

The *receiving list*, Illustration 25, is generally prepared in triplicate. The original copy is sent to the accounting department to be attached to the vendor's invoice. The duplicate is given to the stores department stock clerk to enable a record to be made in the stores ledger. The final copy is retained on file by the receiving clerk.

RECEIVING LIST

STORES DEPARTMENT

Receiving List No. B3166

Received from:

Newark Supply Co.
Newark, N. J.

Via: Jenkins Express Co.

Purchase Order No. 1001

Purchase Requisition No. 8842

Received Jan. 29, 19—

Unpacked Jan. 30, 19—

Placed in Stock Jan. 30, 19—

the following materials in good condition except as noted to the contrary.

Larry Bolton
Receiving Clerk

Quantity	Units	Catalogue No.	Description of Items	Condition
100	gross		Hardwater Soap	OK

ILLUSTRATION 25

76. Manufacturing Department Records.—The original records affecting the accounting system which are prepared in the manufacturing department are the:

(*a*) Materials Specification Sheet, Illustration 26.

(*b*) Stores Requisitions, Illustration 27.

(*c*) Scrap Material Recovered Record, Illustration 28.

(*d*) Spoilage and Salvage Record, Illustration 29.

(*e*) Time Ticket, Illustration 30.

(*f*) Daily Production Record, Illustration 31.

A *materials specification sheet*, Illustration 26, sometimes called a bill of materials, is usually prepared by the production planning department. Each production order is analyzed as to the quantity of materials needed. A copy of the materials specification sheet is sent to the stores department, as soon as the planning

department has ascertained the quantity of each item that is needed for the order, for the purpose of ascertaining whether a sufficient quantity is on hand or whether a purchase requisition will have to be prepared. The copy sent to the foreman of the department, in which the material is first delivered, enables him to have a

MATERIALS SPECIFICATION SHEET

MANUFACTURING DEPARTMENT

No. R641

Feb. 21, 19—

To the foreman of Production Department No. M3, the following materials are required to produce shop order Number 26464.

M. Lewis
Industrial Engineer

Quantity	Unit	Description of Item
14 1	sheets gross	No. 16, 30"x96" Sheet Iron No. 6 Iron Rivets

ILLUSTRATION 26

STORES REQUISITION

Requisition No. 6721

Feb. 23, 19—

To the Storekeeper:

Please furnish the following materials which are to be charged to:

Order 26464

Department Sheet Metal

Account

Quantity	Unit	Description of Items	Unit Price		Amount	
14 1	sheets gross	No. 16, 30"x96" Sheet Iron No. 6, Iron Rivets				

ILLUSTRATION 27

Jacob Rome
Foreman or Departmental Head

record of the materials required for various orders, and to prepare the stores requisitions if they are not also made out by the planning department.

The *stores requisition*, Illustration 27, is sometimes made in duplicate instead of being made in triplicate as described in Art. 72, Section (*b*). After the requisition in duplicate has been filled by the storeroom attendant, one copy goes to a stores

SCRAP MATERIAL RECOVERED RECORD

Sheet Metal **PRODUCTION DEPARTMENT**

No. 2170

March 1, 19—

Credit the following for scrap delivered to the storeroom to Order No. 26464 and Department Sheet Metal.

Quantity	Unit	Description of Item	Unit Price		Amount	
10	lbs.	Sheet Iron		02	$0	20

Received in storeroom March 1, 19—

H. R. Held
Foreman

C. S. Belfour
Storekeeper

ILLUSTRATION 28

SPOILAGE AND SALVAGE RECORD

From Sheet Metal **PRODUCTION DEPARTMENT** No. 519

March 2, 19—

No. and Name of items salvaged

Order No. 26464

Cause of spoilage Defective workmanship

Disposition of salvage:

Cost Department Record	
Material cost	
Labor Cost	
O. H. cost	
Total cost	
Salvage value	
Cost of Spoilage	

Date received 19

C. S. Belfour
Storekeeper

L. Teplitz
Inspector

Theo. Peterson
Foreman

ILLUSTRATION 29

clerk for the stock ledger record, and the other copy goes to the accounting department for the control account and cost records. If two copies are not prepared, the single copy of the requisition usually is sent first to the accounting department, and then to the stores ledger clerk. The unit price and amount columns are filled in by a price clerk after the requisition has been filled by the stores department.

If two copies of the *scrap material recovered record*, Illustration 28, are not prepared, the one copy must serve the need of the stores department for verification of the scrap received before it is forwarded to the cost department. The *spoilage and salvage record*, Illustration 29, must be sent to the storekeeper for verification, and then sent to the cost department where the cost records are adjusted.

TIME TICKET

Feb. 28, 19—

Workman No. 124 Name D. P. Schroedel

Department Sheet Metal Production Order No. 26464

Operation	Time Commenced	Time Finished	Hours Worked	Rate	Earnings	
SM411	8:00 A.M.	12 noon	4	.50		
SM411	1:00 P.M.	4:00 P.M.	3	.50		
Total			7	.50	3	50

Approved *Theo. Peterson*
Foreman

ILLUSTRATION 30

DAILY PRODUCTION RECORD

Department Sheet Metal

The production for Feb. 28, 19— was as follows:

Parts			Finished Units		
Quantity	Units	Name	Quantity	Units	Name
375	each	12 qt. Galvanized Sprinkling Cans			

ILLUSTRATION 31

L. Teplitz
Inspector

77. Sales Department Records.—Original records prepared within the sales department are the:

(*a*) Cash Sales Slip or Ticket, Illustration 32.
(*b*) Charge Sales Slip or Ticket, Illustration 33.
(*c*) C. O. D. Sales Slip or Ticket, Illustration 34.
(*d*) Salesman's Order, Illustration 35.
(*e*) Customer's Invoice, Illustration 36.
(*f*) Customer's Credit Memorandum, Illustration 37.
(*g*) Cash Sales Refund Memorandum, Illustration 39.
(*h*) Salesman's Daily Report, Illustration 38.
(*i*) Summary of Salesmen's Daily Reports, Illustration 40.
(*j*) Salesman's Traveling Expense Allowance Sheet, Illustration 41.

The *cash sales slip or ticket* may be one of two general types. One type is a printed tape prepared by the cash register. A copy of the ticket printed by the cash register is given to the purchaser as a receipt in case he finds it necessary to return the goods. Another type of sales ticket (Illustration 32) is a written form usually

CASH SALES SLIP OR TICKET

	Dept. No.	Clerk No.	Date		
Cash Sales Ticket No. A6475	1	141	1-3-19__		Customer's receipt for identification to hold until package is wrapped.
	Amount Received		Amount of Sale		
	1	00		79	
Cash Sales Ticket No. A6475	Dept. No.	Clerk No.	Date		
	1	141	1-3-19__		
	Description		Amount		Copy enclosed in package.
1 doz.	Hardwater Soap			79	

Send to:
Name *Joseph Gender*
Street *71 Thurston Ave*
City *City*

For delivery purpose.

ILLUSTRATION 32

prepared in triplicate. The original is sent to the accounting department and entered in the income, cash, and stock records. The duplicate is given to the customer, and the triplicate remains in the salesman's sales book.

CHARGE SALES SLIP OR TICKET

Charge Sales Ticket No. B3795	Dept. No.	Clerk No.	Date	
	1	71	1-3-19__	
			Amount of Sale	
			3	16

Customer's Receipt for reference to his purchase in event of lack of promptness in delivery.

Charge Sales Ticket No. B3796	Dept. No.	Clerk No.	Date
	1	71	1-3-19__

Customer's Identification Coin No. 2547	No. Pkgs.	~~Carry~~ or Deliver	Amount of Sale	
	1		3	16

	Description	Amount	
4 doz.	Hardwater Soap	3	16

Copy to Accounting Department

Copy enclosed in package.

Charge to:
Name *Henry Pavian*
Street *2323 Breckenridge St.*
City *City*

Send to: Name
Street *Same address*
City

ILLUSTRATION 33

Three copies of the *charge sales slip*, Illustration 33, are usually prepared. The original is used as a basis for the bookkeeping and accounting and stock records. The duplicate is sent with the delivered goods. The triplicate remains in the salesman's charge slip pad for daily internal auditing purposes.

The *C. O. D. sales slip*, Illustration 34, varies from the two sales tickets mentioned because of the nature of the transaction or type of sale. Four copies are usually prepared. The original goes to the bookkeeping and accounting department. The duplicate goes to the shipping department, the triplicate is sent with the order, and the final copy remains in the salesman's book.

Sales slips used in retail stores are often designed in a single form to serve as a cash sale, charge sale, or C. O. D. sale. The single form provides spaces for each type of sale. Charge sale and C. O. D. sale spaces are ignored where a cash sale is written up on the slip, etc.

The *salesman's order*, Illustration 35, and the customer's invoice, Illustration 36, furnish original records of transactions such as those shown.

C.O.D. SALES SLIP OR TICKET

C. O. D. Sales Ticket No. C981	Dept. No.	Clerk No.	Date
	1	141	1-3-19__

Amount Deposit	Amount C. O. D.		Amount of Sale	
	2	37	2	37

Customer's receipt.

C. O. D. Sales Ticket No. C981	Dept. No.	Clerk No.	Date
	1	141	1-3-19__

Amount Deposit	Amount C. O. D.		Amount of Sale	
	2	37	2	37

Copy to Accounting Department.

	Description	Amount	
3 doz.	Hardwater Soap	2	37

Copy to Shipping Department.

Send to:
Name *Miss Anna Brant*
Street *2525 Allegheny St.*
City *City*

Copy enclosed in package.

ILLUSTRATION 34

A copy of the *customer's credit memorandum*, Illustration 37, is sent to the customer and another copy is sent to the bookkeeping and accounting department. A third copy is sent to the inventory control department if it functions as a separate department, as it often does in a department store, and if the credit involves a return of merchandise that can be resold. A refund on a cash sale is authorized as shown in Illustration 39.

SALESMAN'S ORDER

Order No. 479
Jan. 4, 19—

Sold to: Banker and Gould
417 Newbank St.
City

To be shipped via Truck

Terms quoted 1/10-n/30

H. C. Moore
Salesman

Date Order Filled	Date Order Shipped	Date Order Billed	Order Priced By	Order Filled By	Order Billed By
1-5	1-5	1-5	M.H.	J.K.	D.

Quantity	Unit	Description	Price		Amount	
5	doz.	Hardwater Soap		69	$ 3	45

ILLUSTRATION 35

CUSTOMER'S INVOICE

Your Order No. Salesman
Our Order No. 479
Your Requisition No.
Our Invoice No. A164
Jan. 5, 19—

Shipped via: Truck
Jan. 5, 19—

To: Banker and Gould
417 Newbank St.
City

Terms: 1/10-n/30

H. C. Moore
Salesman

Dept.	Quantity	Unit	Description	Price		Amount	
1	5	doz.	Hardwater Soap		69	3	45

ILLUSTRATION 36

CUSTOMER'S CREDIT MEMORANDUM
(Original)

Your Order No. 0712
Our Order No. 8192
Your Requisition No. R1117
Our Credit Memo. No. 398
Jan. 16, 19—

For goods returned from ☒
For allowance given ☐

To: Morris and Helm
4849 Holmes Blvd.
City

P. M. Gaynor
Salesman

Dept.	Quantity	Unit	Description	Price		Amount	
1	2	doz	Powdered Soap	1	10	2	20

ILLUSTRATION 37

SALESMAN'S DAILY REPORT

B. F. Goodman
Salesman

January 24, 19—

Daily Calls—Old Customers

Name of Firm Called Upon	Order Received		Time Spent
	Yes	No	
Blair, Smith and Co.	√		*2 hrs.*
Johnson, Mueller and Co.	√		*3 hrs.*
Wentworth and Sons		√	*2 hrs.*
Morgan Supply Co.	√		*1 hr.*

New Prospects Called Upon

Name and Address	Order Received	Time Spent
None	*None*	

Total Hours Worked *8*

Location for Remainder of Week

Date		City or Town	Hotel
	Monday	*City*	
	Tuesday	*City*	
	Wednesday	*City*	
	Thursday	*Washington, Pa.*	*Geo. Washington*
	Friday	*Greensburg, Pa.*	*Penn-Lincoln*
	Saturday	*City*	
	Sunday		

ILLUSTRATION 38

CASH SALES REFUND MEMORANDUM

Jan. 6, 19—

For the goods listed below, or for an allowance on merchandise sold for cash, a cash refund is made to Mrs. Wm. Newley.

Returned merchandise inspected by Bowman
Inspector.

Reasons for allowance Defective marking

Dept.	Quantity	Units	Description	Price		Amount of Refund	
1	2	each	18"x12" Black Rubber Mats		85	1	70

Received Payment

Mrs. Wm. Newley
Customer

141
Salesman

Approved *J. Bronson*
Store Manager

ILLUSTRATION 39

The purpose of the records shown in Illustrations 38, 40, and 41 is described in Art. 18.

SUMMARY OF SALESMEN'S DAILY REPORTS

Week Ended Jan. 8, 19—

Salesman	Days Worked															
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
H. C. Moore	–	–	√	√	√	√	√	√								
P. M. Gaynor	–	–	√	√	√	√	√	√								
B. F. Goodman	–	–	√	√	√	√	√	√								

Approved *C. Stanley Chester*
Sales Manager

ILLUSTRATION 40

SALESMAN'S TRAVELING EXPENSE ALLOWANCE SHEET

Salesman's Name B. F. Goodman For Week Ended Jan. 8, 19—

Date	Location	R. R. Fare	Pullman	Bus and Car	Hotel	Meals	Telp. Telg.	Misc.	Total
Jan. 5	Washington	1.50			3.00	2.75	.60		7.85
6	Greensburg	1.40			3.00	2.90	.40	.10	7.80
		2.90			6.00	5.65	1.00	.10	15.65

Unexpended Fund Balance, Report Ended	Dec. 31, 19	none
Advances Received Since Last Report	Dec. 31, 19	25.00
	Total	25.00
Amount Expended Since Last Report	Dec. 31, 19	15.65
Unexpended Fund Balance Report Ended	Jan. 7, 19	9.35

Approved *C. Stanley Chester*
Sales Manager

ILLUSTRATION 41

78. Shipping Department Records.—Original records prepared by employes of the shipping department are the:

(*a*) Bill of Lading.
(*b*) Express Receipt.
(*c*) Daily Truck Record, Illustration 42.
(*d*) Driver's Package Sheet, Illustration 43.

DAILY TRUCK RECORD

Truck No. _____ For the Month of January 19__

Date	Truck Driver	Speedometer Reading		Miles Traveled	Gasoline		Oil		Repairs Cost	Total Cost
		Start	End		Gal.	Cost	Qt.	Cost		
1	James	14740	14862	122	10	1.60				1.60
2	"	14862	14980	118	10	1.60				1.60
3	"	14980	15110	130	10	1.60			.50	2.10
30	Boggs	17490	17595	105					1.10	1.10
31	"	17595	17701	106	12	1.92	8	2.08		4.00
Total										

ILLUSTRATION 42

The railway bill of lading and railway express receipt are not illustrated, because they are standard forms supplied by railroad and express companies. These records are prepared for shipments made by freight or express. They have no accounting significance to the shipper unless the charges are prepaid by him. In case of prepayment, either of the two records are receipts, which are attached to vouchers for out-freight expense. The purpose of the original records shown in Illustrations 42 and 43 is self-explanatory.

DRIVER'S PACKAGE SHEET

Route No. 7 Jan. 2, 19—

Name	Address	C. O. D. Amount	Number of Packages	Nature of Packages: Loose Piece	Bundle	Carton	Box	Bbl.	Remarks
J. Gender	71 Thurston Ave		1			×			
H. Pavian	2323 Breckenridge		1				×		
A. Brant	2125 Allegheny	$2.37	1		×				

Illustration 43

James
Driver

79. Timekeeping and Payroll Records.—The records originating in the payroll department are as follows:

(*a*) Time Book, Illustration 44.
(*b*) Time Clock Card, Illustration 45.
(*c*) Coin and Currency Analysis Sheet, Illustration 46.
(*d*) Payroll Sheet, Illustration 47.

TIME-BOOK

For pay period ended March 31 19__

Workman No.	Name	Location	1 A.M.	1 P.M.	4 A.M.	4 P.M.	12 A.M.	12 P.M.	16 A.M.	16 P.M.	19 A.M.	19 P.M.	27 A.M.	27 P.M.	31 A.M.	31 P.M.
100	R. Nagel	Repair Shop	√	√	√	√	√	√	√	√	√	√	√	√	√	√
101	B. Stearns	" "	√	√	√	√	√	√	√	√	√	√	√	√	√	√
102	A. Fisher	" "	√	√	√	√	√	√	√	√	√	√	√	√	√	√
103	R. Ayars	" "	√	√	√	√	√	√	√	√	a	√				

Illustration 44

The *coin and currency analysis sheet*, Illustration 46, is an original record made use of only where the employes are paid in actual cash. Where the employes are paid by check, there is no need for the form shown in Illustration 46.

TIME CLOCK CARD

WEEK ENDING JANUARY 7, 19
L. T. R. Co. Form No. 1212.

No. 1
NAME JOHN NEELY

	MORNING IN	MORNING OUT	NOON IN	NOON OUT	EXTRA IN	EXTRA OUT	
M	7 04	12 01	12 48	4 32			8 1/4
TU	6 54	12 02	12 52	4 35			8 1/2
W	6 45	11 30	12 54	4 36			8
TH	6 57	12 03	12 56	4 31			8 1/2
FR	6 46	12 02	12 49	4 30	5 00	9 05	4 1/2
SA	6 47	12 30					5 1/2

TOTAL TIME 53 1/4 HRS.
RATE
TOTAL WAGES FOR WEEK $

Illustration 45

COIN AND CURRENCY ANALYSIS SHEET

Pay Period Ended 19__

Workman No.	Name	Amount of Pay	Currency $50	$20	$10	$5	$2	$1	Coin .50	.25	.10	.05	.01
100	R. Nagel	$ 56.90	1			1		1	1	1	1	1	
101	B. Stearns	57.10	1			1	1				1		
102	A. Fisher	45.50		2		1			1				
103	R. Ayars	49.50		2		1	2		1				
Each Denomination Total			2	4		4	3	1	3	1	2	1	
Total Payroll		$209.00	100.00	80.00		20.00	6.00	1.00	1.50	.25	.20	.05	

Illustration 46

PAYROLL SHEET NO.____

Pay Period Ended _____ 19____

Workman No.	Name	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total Hours	Rate	Total Earnings	Deductions: Cash Advances	Deductions: Group Insurance	Deductions: Miscellaneous	Deductions: Total Deductions	Net Earnings
100	R. Nagel	8	-	-	8	8	8	8	8	8	-	8	8	8	8	8	8	-	-	8	8	8	8	8	8	-	8	8	8	8	8	8	104	$0.60	$ 62 40	$5 00	50		$5 50	$56 90
101	B. Stearns	8	8	-	8	8	-	8	8	8	-	8	8	8	8	8	8	8	-	8	-	8	8	8	8	-	8	8	8	8	8	8	96	.60	57 60	10 00	50		50	57 10
102	A. Fisher	8	8	-	8	8	8	8	8	8	-	8	8	8	8	8	8	8	-	8	8	8	8	8	8	-	8	8	8	8	8	8	112	.50	56 00		50		10 50	45 50
103	R. Ayars	8	8	-	-	8	8	8	8	8	-	8	8	8	8	8	8	8	-	8	8	8	8	8	8	-	8	8	8	8	8	8	104	.50	52 00		50	2 00	2 50	49 50
																																	416		$228 00	$15 00	$2 00	$2 00	$19 00	$209 00

ILLUSTRATION 47

80. Administrative Department Records.—Some of the original records prepared in the administrative division or general offices are the:

(*a*) Petty Cash Voucher, Illustration 48.
(*b*) Outgoing Local Telephone Call Record, Illustration 49.
(*c*) Long Distance Telephone Call Record, Illustration 50.
(*d*) Outgoing Telegram Record, Illustration 51.
(*e*) Record of Cash Received (by Mail), Illustration 52.
(*f*) Shop Production Order, Illustration 53.

PETTY CASH VOUCHER

No. 555

Jan. 2 19____

Cashier:

Pay to Burns Express Co. for Cartage In

(attach bill) and charge:

Account	Amount
5161	$4.68

Authorized *J. Blum*

ILLUSTRATION 48

OUTGOING LOCAL TELEPHONE CALL RECORD

Jan. _____ 19_____

Departments	1	2	30	31	Monthly Total
Employment	10	6	3	3	98
Purchasing	10	12	13	10	265
Selling	12	12	15	9	301
Shipping	8	7	9	6	195
Bookkeeping	2	1	0	2	23
Accounting	6	4	7	5	167
Payroll	1	0	0	1	15
General Office	15	11	10	17	241
Cashier	7	3	4	2	103
Credit	1	5	5	7	139
Secretary-Treasurer	1	4	6	4	92
	73	65	72	66	1,639

ILLUSTRATION 49

LONG DISTANCE TELEPHONE CALL RECORD

For the Month of January 19

Date	Department from Which Call Was Made	Name of Party Making Call	Point to Which Call Was Made	Verification With Telephone Company Statement and Cost
1	Purchasing	Barber	Youngstown, O.	$ 0.30
31	Selling	Page	Chicago, Ill.	2.90
	Total			$94.87

ILLUSTRATION 50

OUTGOING TELEGRAM RECORD

For the Month of January 19

Date	Department from Which Telegram Was Sent	Name of Party Sending Telegram	Point to Which Telegram Was Sent	Verification With Telegraph Company Statement and Cost
1	Purchasing	Barber	Greenfield, Conn.	$ 1.17
31	General Office	Moorhead	Beloit, Wis.	1.75
	Total			$116.69

ILLUSTRATION 51

RECORD OF CASH RECEIVED (By Mail)

C. H. Bronson — Name of Party Listing Cash Items

January 1, 19—

Name of Customer	Amount	
Caldwell, Mary	$ 49	60
Drake, Jas.	2	95
Holcomb, C. M.	161	72
Newton, V. M.	11	50
Total	$225	77

ILLUSTRATION 52

SHOP PRODUCTION ORDER

Production Order No. P476

To the Shop Superintendent: Jan. 3, 19—

The following items are to be produced for stock / special order ☒ All materials, labor, and overhead expenses involved are to be charged to this order.

M. C. Byers
General Manager

Quantity	Unit	Description
1	only	Awning as specified on the attached drawing.

ILLUSTRATION 53

The records shown in Illustrations 48 to 52 inclusive are self explanatory and require no special description. The *shop production order*, Illustration 53, is most frequently issued by the production planning department in large manufacturing concerns. There are occasions, however, where because of the limited size of the manufacturing business or because there is a made-to-order department in a department store, that the shop orders are prepared by some official of the administrative department.

CASH REGISTER DAILY CASH COUNT

Department 1
Register No. 3

January 4, 19—

		Number	Amount	
Currency	$50	—		
	20	1	$20	00
	10	3	30	00
	5	10	50	00
	2	—		
	1	19	19	00
Coin	$1.00	—		
	.50	9	4	50
	.25	16	4	00
	.10	36	3	60
	.05	55	2	75
	.01	37		37
Checks (list separately)				
Total			$134	22

ILLUSTRATION 54

81. Cashier's Department Records.—The original records prepared within the office of the cashier are as follows:

(*a*) Cash Register Daily Cash Count, Illustration 54.
(*b*) Daily Cash Register Receipts Reading, Illustration 55.

(*c*) Cash Received on Account (in Person), Illustration 56.
(*d*) Daily Deposit Slip.

The daily deposit slip is the customary form furnished by the bank.

DAILY CASH REGISTER RECEIPTS READING

Department 1
Register No. 3 January 4, 19—

Cash Register Reading	134.72
Cash Receipts	134.22
Cash Short or Over	.50 short

ILLUSTRATION 55

CASH RECEIVED ON ACCOUNT (In Person)

Received from Clarke, Mrs. Jacob January 4, 19—

to apply on account $15.00

ILLUSTRATION 56

82. Credit Department Records.—Original records created in the credit department are the:

(*a*) Approval for Credit Record, Illustration 57.
(*b*) Lease Contracts.

APPROVAL FOR CREDIT RECORD

Credit Rating A No. 2156

To the Sales Manager: January 2 19

The request of Mr. Mason Smithers, whose address is 4150 Forbes St., City has ~~not been~~ been granted, credit not to exceed an amount of $100.00 a month.

E. T. Boswell
Credit Manager

References: Name	Address
Forbes National Bank	
H. C. Criswell	3751 Bellefield Ave.

ILLUSTRATION 57

RECORD OF NOTES ISSUED

Note Number	Name of Payee	Address	Period Time	Date Issued	Date Due	Interest Rate	Face	Date Paid	Remarks
200	Bronson & Co.	New York	60 days	1-2-	3-3-	6%	$ 1,000 00	3-3-	

ILLUSTRATION 58

RECORD OF NOTES RECEIVED

Name of Maker	Address	Period Time	Date Issued	Date Due	Interest Rate	Face	Date Paid	Discounted Date	Discounted Discounted at	Remarks
McCurdy & Son	Butler, Pa.	30 da.	1-5-	2-4-	6%	$600 00	2-5-	1-12	Northern Trust Co.	
H. C. Morris	Sewickley	60 da.	1-10-	3-11-	6%	750 00				

ILLUSTRATION 59

The original *credit record*, Illustration 57, is kept on file in the office of the credit manager, while the duplicate is sent to the sales department. The duplicate usually does not show the credit rating or the references.

Lease contracts are generally in the form of a bailment lease or a conditional sales contract.

83. Treasury Department Records.—Original records usually prepared in the treasury department are the:

(*a*) Record of Stockholders.
(*b*) Dividend Payment Record.
(*c*) Record of Notes Issued, Illustration 58.
(*d*) Record of Notes Received, Illustration 59.
(*e*) Daily Record of Checks Issued, Illustration 60.
(*f*) Voucher Index of Creditors, Illustration 60(*a*).

The *record of stockholders* is usually not a printed form but a typed list of stockholders which shows their addresses, the certificate numbers issued to them, and the number of shares owned by them.

The *dividend payment record* is likewise a typewritten sheet which lists each stockholder's name, address, number of shares held, and amount of dividend. This record becomes the basis for preparing the dividend checks. It, likewise, is the authority for preparing the voucher to provide for the transfer of the necessary funds from the general cash account to the dividend fund.

The *record of notes issued*, Illustration 58, as well as *notes received*, Illustration 59, is usually in some permanent bound-book form. Usually it is called a register, yet it is not ordinarily a book of original entry.

DAILY RECORD OF CHECKS ISSUED

Date	Voucher No.	Check No.	Amount of Check		Discount	
Jan. 2	A1 A5	2645 2646	$21 36	78 63		22 37

ILLUSTRATION 60

VOUCHER INDEX OF CREDITORS

Creditor A. Green & Co.
Address 362 South Street, Pittsburgh, Pa.

Date Invoiced	Voucher No.	Amount	Date Paid	Remarks
Jan. 1	1-1	487.92	Jan. 12	Discount 1/10

ILLUSTRATION 60 (*a*)

The *daily record of checks issued*, Illustration 60, is sometimes so designed that it can be used as the check register. If it is used as a check register, another column must be provided for the Accounts Payable account column.

The *voucher index of creditors*, Illustration 60 (*a*), is not always maintained in the cash disbursement office of the treasury department. It is often handled by the voucher clerk in the accounting department.

CUSTOMER'S MONTHLY STATEMENT

Jan. 31, 19

To: C. M. Paulson
844 Penn Ave.
City

Date	Reference	Debits		Credits		Balance	
Jan. 1						$48	20
11				$48	20		
15		$6	45			6	45
24		8	20			14	65

ILLUSTRATION 61

VOUCHER CHECK ORIGINAL

Check Number 2645 January 2, 19—
Voucher Number A1

NORTHERN TRUST COMPANY

Pay to the order of Michigan Textile Co. $ 21.78
Twenty One and 78/100 Dollars

General Stores, Inc.

Treasurer Controller

Detach check above and retain this statement for your reference

Invoices Paid

Date	Invoice	Amount		Date	Invoice	Amount	
Dec. 23	B6162	$22	00				
	Less discount		22				
	Net	$21	78				

ILLUSTRATION 62

84. Accounting Department Records.—Original records made in the accounting department are as follows:

(*a*) Customer's Monthly Statements, Illustration 61.
(*b*) Voucher or Voucher Check, Illustrations 62, 62 (*a*).
(*c*) Departmental Expense Distribution Sheet, Illustration 63.
(*d*) Wage Distribution Sheet, Illustration 64.
(*e*) Perpetual Inventory Record, Illustration 65.
(*f*) Overhead Expense Distribution Sheet, Illustration 66.
(*g*) Insurance Record, Illustration 67.
(*h*) Depreciation Record, Illustration 68.

One of the most modern plans of preparing monthly statements is made possible by the use of bookkeeping machines. A carbon copy of each invoice is retained in the file under the customer's name. At the end of the month, the totals on each of the invoice copies are itemized on a summary statement form and mailed to the customer.

VOUCHER CHECK DUPLICATE

Check Number 2645

January 2, 19—

Voucher Number A1

Payable to Michigan Textile Co. $ 21.78

Twenty One and 78/100 Dollars

Purchase Order Checked by *H. M.*
Invoice Prices and Extensions Checked by *C. P.*
Voucher Distribution made by *H. F.*
Voucher Distribution Checked by *C. R. P.*
Entered in Voucher Register by *M. T.*

Payment Approved:

Controller

Voucher Folio 1

Invoices Paid

Date	Invoice	Amount		Date	Invoice	Amount	
Dec. 23	B6162	$22	00				
	Less discount		22				
	Net	$21	78				

Voucher Distribution

Code	Account Name	Merchandise Cost		Purchasing and Handling Expense		Selling Expenses		Administrative Expenses		General Ledger	
5102	Purchases	$22	00								

ILLUSTRATION 62 (*a*)

The purpose of the perpetual inventory record of the type shown in Illustration 65 is to ascertain the inventory cost value at the end of each month without going through the laborious procedure of taking a physical inventory and pricing

DEPARTMENTAL EXPENSE DISTRIBUTION SHEET

For the Month of February, 19—

	Total		Employment		Repairs and Cleaning		Purchasing		Selling and Inventory Control		Shipping and Delivery		Accounting, Bookkeeping, and Payroll		General Office and Credit		Treasury	
Postage	$ 131	20					$ 34	22	$ 65	70	$ 5	30	$ 3	52	$15	70	$ 6	76
Telephone and Telegraph	186	47	$ 2	65			67	80	74	27	15	60	5	45	16	50	4	20
Power	90	00	3	60	$ 1	80	4	50	54	00	9	90	5	40	7	20	3	60
Heat	200	00	8	00	4	00	10	00	120	00	22	00	12	00	16	00	8	00
Water	30	00	1	20		60	1	50	18	00	3	30	1	80	2	40	1	20
Compensation Insurance	46	00	1	80	2	60	1	10	14	00	19	00	2	20	3	10	2	20
Insurance	120	00		80		40	1	00	112	00	2	20	1	20	1	60		80
Repairs and Maintenance Equipment	180	00	1	00			3	50	10	00	155	00	6	50	2	00	2	00
Repairs and Maintenance Building	119	80	4	80			6	00	74	20	13	20	7	20	9	60	4	80
	$1,103	47	$23	85	$ 9	40	$129	62	$542	17	$245	50	$ 45	27	$74	10	$33	56

ILLUSTRATION 63

it. Illustration 65 shows a form used in arriving at an inventory figure by the retail method. All invoices are entered in the cost price and selling price columns. The difference between the cost and retail prices is the mark-on.

WAGE DISTRIBUTION SHEET

For the Month of January, 19—

Account Number	Payroll Period Ended Jan. 15		Payroll Period Ended Jan. 31		Total	
5201	$ 350	00	$ 350	00	$ 700	00
5202	227	50	235	80	463	30
5301	1,196	85	1,228	50	2,425	35
5302	540	67	595	00	1,135	67
5401	665	00	665	00	1,330	00
5402	555	00	555	00	1,110	00
5403	320	00	320	00	640	00
5404	150	00	140	00	290	00
Total	$4,005	02	$4,089	30	$8,094	32

ILLUSTRATION 64

PERPETUAL INVENTORY RECORD

Department 1 — Month of January 19—

Reference	Cost Price	Mark-on Purchases		Mark Ups		Purchases Returns and Allowances	Inventory at Selling Price	Mark Downs		Gross Profit Percentage on Selling Price	Net Sales	Inventory at Close	
		Per Cent	Amount	Per Cent	Amount			Per Cent	Amount			Selling Price	Cost Price
Balance, Jan. 1	$10,000 00	66⅔	$ 6,666 67				$16,666 67			40%			
Purchases, Jan.	14,500 00	66⅔	9,666 67				24,166 67			40%			
Purchases Returns, Jan.						$500 00							
Totals.	$24,500 00		$16,333 34			$500 00	$40,833 34						
Deduct Purchases Returns	500 00		333 34			500 00	833 34						
Available	$24,000 00		$16,000 00				$40,000 00						
Deduct Net Sales							29,750 00				$29,750 00		
Balance, Inventory at Jan. 31, at selling price							$10,250 00					$10,250 00	
Cost of Inventory at Jan. 31 (deduct 40% of selling price)													$6,150 00

ILLUSTRATION 65

OVERHEAD EXPENSE DISTRIBUTION SHEET

(Manufacturing Establishment)

Accounts	Total		Departments							
			A		B		C		D	
Power	$ 481	80	$162	20	$155	30	$109	20	$ 55	10
Insurance	46	20	16	50	14	20	10	00	5	50
Maintenance	515	34	125	50	162	38	151	70	75	76
Heat	100	00	40	00	30	00	20	00	10	00
Depreciation	729	08	219	90	355	76	116	92	36	50
Taxes	110	00	35	00	35	00	25	00	15	00
General O. H.	643	50	177	90	200	00	165	60	100	00
	$2,625	92	$777	00	$952	64	$598	42	$297	86

ILLUSTRATION 66

INSURANCE RECORD

Policy No.	Underwriter	Coverage	Amount	Period	Date Effective	Date Expiration	Premium	Monthly Cost
7124756	Union Ins. Co.	Mdse.	$5,000	1 yr.	1-1-19__	1-1-19__	$ 40 00	$ 3 33
61719Y	Rex Ins. Co.	Mdse.	10,000	1 yr.	3-1-19__	3-1-19__	80 00	6 67
5543	Noble Ins. Co.	Bldg.	90,000	3 yrs.	6-1-19__	6-1-19__	450 00	12 50

ILLUSTRATION 67

DEPRECIATION RECORD

Asset No.	Asset Name	Original Cost	Depreciation Rate	Annual Depreciation	Undepreciated Amount	Monthly Depreciation Amount	Jan.	Feb.	Dec.	Amount Charged Off This Year
B1	Truck	$1,600 00	25%	$400 00	$1,200 00	$33 33	$33.34	$33.34	$33.33	$400 00
B2	Truck	1,200 00	25%	300 00	1,050 00	25 00	25.00	25.00	25.00	300 00
	Total						$58.34	$58.34	$58.33	$700 00

ILLUSTRATION 68

85. Personnel Department Records.—Original records prepared in the personnel department are as follows:

(*a*) Job Application.
(*b*) Job Specification.
(*c*) Personnel Record.
(*d*) Late and Absentee Record.
(*e*) Resignation and Discharge Record.

None of these records are illustrated since they are not accounting records. They must, however, be provided for in many systems. The information collected on the personnel department records is for statistical or other purposes.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) Explain the meaning and primary purpose of original records.

(2) (*a*) Comment upon the use of multicopies of original records.
(*b*) Name original records which lend themselves readily to the use of the multicopy form.

(3) What is the relationship between original records and (*a*) internal checks, (*b*) statistical reports, (*c*) external audits?

Look over your answers to the questions following Chapters VI, VII, VIII and immediately send them to the Schools for correction.

CHAPTER IX

CONSIDERATION OF ACCOUNTS IN DESIGNING A SYSTEM

86. The Purpose of Accounts.—Through the use of accounts, the details of the business transactions are recorded and the accountant becomes intimately acquainted with the operating results and financial condition of the enterprise. The accounts also furnish the information that informs the owners and managers of a concern, whether or not the business is navigating in safety or is headed towards the rocks of insolvency.

An intimate knowledge of all of the various accounts in a particular system is a prerequisite to the complete understanding of the system. Familiarity with the names of the accounts in the system and a knowledge of the functions of each account are requirements one must possess in order to supervise the operation of the system.

The accounts are really the framework of an accounting system, and before transactions can be systematically recorded, a classification of accounts must be developed. Also a system of accounts must be outlined before books of original entry can be designed. When internal checks are devised, many of the accounts form a part of the internal-check scheme. An account classification and code system are prerequisite to the use of tabulating equipment. Accounting statements are prepared from the data collected in the accounts.

In making the preliminary investigation to determine the requirements for an accounting system, the investigator must constantly have in mind a skeleton outline of the accounts that will be necessary for recording the transactions in an adequate manner. The accounts required to accumulate the business transactions can be ascertained from the existing conditions, as shown by the information given on the questionnaire which was used in the preliminary investigations.

87. Account Classification.—One of the first principles of accounting theory is that there are different classes of accounts, and this principle must not be lost sight of in designing an accounting system. In general, accounts may be classified as financial accounts or operating accounts, according to the nature of the transactions entered therein. Financial accounts record information of such a nature that the balances of the accounts are made use of in the preparation of the balance sheet. Operating accounts record data that are used to prepare the profit and loss statement. Each of the two account groups is further subdivided into more detailed classifications.

In the designing of an accounting system, the account classification should provide not only for all of the necessary detailed accounts, but for an orderly classification by groups.

The financial accounts should be classified as to assets, liabilities and proprietorship accounts.

The asset accounts should be grouped as to current assets, deferred charges to operations, and fixed assets. The current-asset accounts include the accrual receivable accounts. The necessary reserve accounts for bad debts, depreciation, and inventory losses, as well as the Notes Receivable Discounted account also are found in the current asset group.

The liability accounts should be grouped as to current liabilities, deferred credits to operation, and fixed liabilities. The current liability accounts should include the required intraplant and liability reserves together with the necessary accrual payable accounts.

Proprietorship accounts should include the capital and personal accounts of a sole proprietorship or partnership form of enterprise. In a corporation, the proprietorship accounts are for the different classes of capital stock and surplus, and all surplus reserve accounts.

The operating accounts should be classified as to incomes and expenses. The income accounts should be grouped as to the operating incomes that are the principal sources of the enterprise's income, and as to other incomes. Other income accounts record the earnings from incidental sources.

The expense accounts should be grouped by divisions or departments, such as manufacturing, selling, administrative, and other expenses. Other expenses are variously known as other income deductions, non-operating expenses, and financial management expenses.

The principal reasons for emphasizing so strongly the importance of account classification are as follows. First, an orderly arrangement of accounts, as described, aids in the development of the system from the preliminary study. Second, the orderly arrangement of the accounts in the ledger, according to the predetermined classification, makes easier the preparation of the accounting statements at the end of each month. All financial accounts grouped together in the ledger are entered in the trial balance and are available on the work sheet in the same order for the purpose of preparing the balance sheet. Similarly the operating accounts are available for the preparation of the profit and loss statement. Third, the accounts, when arranged by groups in the ledger, can be referred to with greater ease.

88. Chart of Accounts.—After the various groups of accounts for a system have been determined, they should be set up in outline or chart form, as shown in Illustration 7. The number of detailed accounts set up in the chart is determined by the preliminary study and the nature of the system. The chart of accounts should be well-near perfect before the system is placed in operation. Much thought must be given, not only to the accounts necessary at present, but, likewise, to the possible need for additional accounts in the future.

The chart of accounts is useful both to the system designer and the employes who are to operate the system. The system designer makes use of the chart of accounts which he has developed for the purpose of:

(*a*) Designing the forms for the various original records.

(*b*) Setting up the general ledger accounts.

(*c*) Naming the accounts to be used as control accounts.

(*d*) Determining the titles to be used for the column headings in the journals.

(*e*) Aiding in the development of certain internal checks.

The employes of the enterprise who operate the system, after it is placed in use, find the chart of accounts a valuable aid. This is especially true in the case of new employes whose work requires them to become familiar with the accounts. The chart of accounts is the clearest and most concise method of presenting the entire list of accounts to any one having need of this information.

After the chart of accounts has been designed, a code system should be adapted to it.

89. Code Systems for Accounts.—Every accounting system should provide a system of code numbers for the accounts, for several reasons. In the first place, while every account requires a name to convey a clear understanding of its nature, it is often easier to record the transactions by code numbers than by account names. In the second place, it is easier to make postings to an account that always has the same number, rather than to make the postings to the same non-coded account on pages, the numbers of which vary from time to time when the occasion necessitates the transfer of a balance from one page to another. In the third place, a code-number scheme for accounts is absolutely necessary where machine tabulation is used. Account names can not be so conveniently punched on a tabulating card as can account numbers.

There are numerous types of account codes. In any code scheme, however, there are certain principles to which there must be strict adherence. The principles are simplicity, clarity, and flexibility.

Simplicity in the design of an account code system provides for the use of as few digits as possible in each of the account numbers. The account number should never contain more than five digits. A larger number of digits in an account code system will tend to become burdensome.

Clarity in the design of the code system is absolutely essential. The series of codes should be so designed as to enable one using them to identify promptly the general group of accounts affected in addition to the specific account. This implies that every main division of accounts, such as, assets, liabilities, expenses, etc., and subdivisions of each should have a special distinguishing number.

Flexibility in the design of the code system provides for future expansion of the accounts if this should be necessary. A properly designed code system provides for the addition of new accounts without disruption of the code system that is already in use and understood by the employes.

There are a number of different general types of code systems. A combination of capital letters and numbers can be used. The following example shows the nature of this method:

Accounts	Using Series		Accounts	Using Series	
Current assets	A10 to	A19	Expenses, Manufacturing:		
Deferred charges	A20 to	A29	Materials	MM1 to	MM5699
Fixed assets	A30 to	A39	Labor	ML5700 to	ML5799
Current liabilities	L10 to	L19	Overhead expenses	MO5800 to	MO5999
Deferred credits	L20 to	L29	Expenses, Selling	S6100 to	S6299
Fixed liabilities	L30 to	L39	Expenses, Administrative and General	G6300 to	G6399
Capital stock	C10 to	C19	Expenses, Other	O6400 to	O6499
Surplus	C20 to	C29			
Incomes, operating	I10 to	I19			
Incomes, non-operating	I20 to	I29			

Another account code plan is to make use of whole and decimal numbers in the following manner:

Accounts	Using Series	Accounts	Using Series
Current assets	1.10 to 1.19	Incomes, non-operating	4.20 to 4.29
Deferred charges	1.20 to 1.29	Expenses, Manufacturing:	
Fixed assets	1.30 to 1.39	Materials	5.1 to 5.699
Current liabilities	2.10 to 2.19	Labor	5.7 to 5.799
Deferred credits	2.20 to 2.29	Overhead Expenses	5.8 to 5.999
Fixed liabilities	2.30 to 2.39	Expenses, Selling	6.1 to 6.299
Capital stock	3.10 to 3.19	Administrative expenses	6.3 to 6.399
Surplus	3.20 to 3.29	Other expenses	6.4 to 6.499
Incomes, operating	4.10 to 4.19		

Still another code plan is to use whole numbers only, as shown in Illustration 7, Page 74. Whatever code scheme is adopted, it should be simple, clear, and flexible.

90. The Function of Accounts.—A general definition for an account is a chronological record of business transactions, similar or dissimilar, pertaining to the same person or thing. Many of the accounts required in a system do not need to have their function defined specifically when designing the system. Illustrations of accounts common to practically all business enterprises are Cash, Notes Receivable, Land, Purchases, Wages, etc.

There are other accounts of a peculiar nature, however, which need a specific statement as to their nature and use. Some examples of accounts used by certain specific businesses are, Deferred Gross Profit on Lease Sales, Reserve for Furnace Relining, Guarantee Deposits, Underabsorbed Overhead Expense, Contracts in Transit, etc. Practically every business concern, because of conditions special to itself, has need for the use of some peculiar account or accounts. Where the necessity arises for the use of peculiarly named accounts, the system designer should state in writing the function of each such account.

In stating the function of an account, the following factors should be included:

(*a*) The nature of all the debit items, together with their posting sources.

(*b*) The nature of all the credit items with their posting sources.

(*c*) The nature of the balance at the end of the month; that is, whether a debit or credit balance.

(*d*) The disposition of the balance, if it is transferred to another account, and the statement in which it appears at the end of the month if it is not transferred.

An example of the manner in which the function of an account should be stated is as follows. The account used is listed in Illustration 7:

Account 1107, Accounts Receivable, Lease

1. Debit this account with the selling price of all goods sold on installment leases only. The posting is made from the sales register at the end of each month.
2. Credit this account with:
   (*a*) The cash received on account from customers to whom sales have been made on installment leases only. The posting is made from the cash receipts journal at the end of each month.
   (*b*) The uncollected balance of the customers' accounts resulting from repossession of goods previously sold. The postings are made from journal vouchers as the occasion requires.
3. The balance in the account at the end of the month is a debit one.
4. The balance is shown as a current asset on the balance sheet.

A statement of the functions of accounts sometimes includes complete descriptions of the functions of all the accounts required in the system. This is often the case where the system is being designed for a newly organized enterprise or where uniform accounting systems are being installed. The descriptions of the functions of the accounts should be contained in an accounting system manual such as is described in Chapter XII.

91. Choosing the Accounts for the System.—The accounts chosen by the system designer will depend chiefly upon the nature of the business, the size of the business, and the type of accounting control desired. The accountant's preliminary study will disclose these three factors.

The nature of the business will determine the various accounts that are needed and the necessity, if any, for accounts of a peculiar nature.

The size of the enterprise will also influence the number of accounts of similar nature that are required. Whether or not numerous sales accounts are needed depends upon the need for separating sales by departments, commodities, etc. If there is a need for a split-up of sales by lines of product and departments, perhaps this had better be obtained by a statistical analysis at the end of the month. When statistical analyses are used, there need be but one sales account. The preliminary

study and the design of the system will indicate the best procedure to follow with respect to the nature and number of accounts used.

The type of accounting control desired is invariably related to the use of certain accounts. Some of the questions respecting control with which the system man is confronted, in the design of a system, are as follows: How many control accounts are needed? How will the control accounts relate to or serve as a help in establishing internal checks? Is there a need for reciprocal control accounts?

No system of consequence today is complete without control accounts. Whether or not a specific control account is desirable is determined by certain analyses made during the preliminary study of the business transactions. If a large number of accounts of a similar nature are required, and the transactions affecting these accounts occur with frequency, then a control account for such a group of accounts should be established.

The purposes of control accounts are numerous. Chief among these are that they:

(*a*) Eliminate detailed accounts from the general ledger.

(*b*) Make the preparation of the trial balance easier and shorter.

(*c*) Serve as a basis for testing the accuracy of certain divisions of accounts handled by certain individuals.

(*d*) Aid in the operation of certain internal checks.

The principal control accounts of a general nature, that may be incorporated in an accounting system, are as follows:

Accounts Receivable
Accounts Payable
Stores Inventory
Work in Process Inventory
Finished Goods Inventory
Consigned Goods Inventory
Branch House Inventory
Manufacturing Overhead Expenses
Selling Expenses
Administrative Expenses
Capital Stock

The use of reciprocal control accounts is required where branch house accounts are controlled at the general office. Reciprocal control accounts are also made use of in establishing a control over a cost system when the cost accounts are separated from the general books. Sometimes a private ledger is desired by the management, and this requires the use of reciprocal control accounts.

92. Accounts That Aid in Operation of Internal Checks.—The accounts that aid in the operation of certain general internal checks are referred to in connection with the internal check illustrations in Chapter VII. For convenience, the illustrations and the accounts affected are listed in the accompanying tabulation. Little can be said about accounts which aid in the operation of internal checks that would not be a repetition of what already has been said in preceding chapters.

ACCOUNTS THAT AID IN OPERATION OF CERTAIN INTERNAL CHECKS ILLUSTRATED IN CHAPTER VII

Illustration in Chapter VII	Internal Check For	Control Accounts Incorporated in Internal Check	Control Accounts Indirectly Affected
8	Merchandise Inventory	Merchandise Inventory	Accounts Receivable Accounts Payable
9	Expenses	Selling Expense	Accounts Payable
10	Lease Sale Contracts	Accounts Receivable, Lease	
11	Payroll	Payroll	Accounts Payable
13	Cash Receipts	Accounts Receivable	
14	Cash Disbursements	Accounts Payable	
16	Accounts Receivable	Accounts Receivable	
18	Capital Stock	Capital Stock	

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) (*a*) What is meant by a "chart of accounts"?

(*b*) Of what advantage is a chart of accounts to the designer of an accounting system?

(2) (*a*) Explain the reasons for a code system in connection with the accounts used in an accounting system.

(*b*) What are the fundamental principles to be followed in designing a code system? Describe each of the principles in detail.

(3) What is meant by the "function" of an account?

Retain your answers and continue with the study of the next chapter.

CHAPTER X

BOOKS OF ORIGINAL ENTRY

93. Significance of Books of Original Entry.—Books of original entry, as described in elementary accounting courses, are journals or registers in which the business transactions are first entered as a permanent record. The records of business transactions in the journals or registers are called journal entries. The entries are prepared from the information gathered on the original records. There are substitutes for the regular bound or loose-leaf page journal in which journal entries are written, and these substitutes are described in more detail further on.

The significance of books of original entry, as they relate to the accounting system as a whole, is that they are the means by which the business transactions reach the ledgers. The requisites of an accounting system that pertain to the journals used are as follows:

(*a*) There must be a sufficient number of journals to separate the transactions into certain basic classifications, such as, cash receipts, cash payment, sales, etc.

(*b*) Principles of columniation, including the principle of debit and credit equality must be adhered to.

(*c*) There must be column headings possessing titles to correspond to the names of the accounts previously determined.

(*d*) Provision must be made for columns for the various control accounts that have already been decided upon.

(*e*) There must be established, where possible, journals of such nature that the necessity for the transcribing of transactions from the original records is eliminated.

(*f*) A relationship must be established between certain original records and journals whereby definite responsibilities can be assigned certain individuals.

94. Ascertaining the Journals Needed for the System.—The size and nature of the enterprise are of prime importance in determining what journals are to be used in the system. There are certain journals that are so generally used by commercial and industrial concerns that they may well be called the standard set of journals. They are the voucher register, the check register, the sales journal, the cash receipts journal, and the general journal. The widespread use of these five journals in trading and industrial concerns results from the nature of the transactions occurring within such concerns. Principally, the transactions in such concerns are the expenditures recorded in the voucher register, cash payments, sales,

cash receipts, and the miscellaneous transactions that are recorded in the general journal.

One of the duties of the system designer is to analyze the transactions in the enterprise from a functional and quantity viewpoint. This means that the daily transactions should be classified into groups in accordance with their nature, and that the number of times a transaction of each classification occurs each month should be estimated. This analysis will disclose what journals are required for the system.

95. Principles of Columniation.—The matter of ascertaining the number of columns to include in each journal is akin to the problem of determining how many journals to include in the system. The functional analysis of the transactions will disclose the nature of the transactions, thereby furnishing one half of the information necessary for determining the number of columns needed for each journal. The quantity analysis of the transactions will reveal the estimated number of transactions of a given nature, thereby furnishing the other half of the information necessary to determine the number of columns to be included in the journal.

One of the general principles to follow in columniation is to have a separate column for each group of like transactions that occur with relative frequence. The system man must decide between two conflicting situations when determining the number of columns desirable in a journal. With each additional column, the number of current postings is reduced, and this is a factor always to be given consideration. On the other hand, it would be folly to have a special column for, let us say, advertising expense in the voucher register, if it was found that only two or three invoices or bills for this item of expense would be received each month. The space consumed by a column for advertising expense on each sheet of the voucher register might contribute to making the width of the journal page clumsy, and this would more than offset the value of reduced postings. Many similar situations must be weighed by the system man before he determines whether or not certain columns should be included in certain journals.

Another general principle of journal columniation is to establish the necessary debit and credit columns in each journal. The debit and credit columns are fundamental and absolutely necessary, while all other columns of the journal are merely supplementary. The debit and credit columns of the principal journals in general use are shown in the illustrations of this chapter.

96. Naming the Column Headings of the Journals.—The column headings of journals consist chiefly of the titles of accounts previously entered in the chart of accounts. There are often other general captions above the columns bearing the account titles. An example of this is to be found in the voucher register, Illustration 69. When the number of columns for each journal was ascertained, as described in Art. 95, the titles to be given to the columns were, of course, determined at the same time. Examples of journal column headings are found in illustrations in this chapter.

97. Providing for the Necessary Control Account Columns.—The number of control account columns is ascertained in advance from a study made as to the nature of the control accounts desired. This feature of system design is discussed in Art. 91. After the number of control accounts required for the system has been ascertained, their relationship to the journals must be stated and incorporated in the design of the journals. That is, a certain column or certain columns headed by the names of the control accounts must be provided in certain journals. For example, where an Accounts Receivable control account is used, the sales journal and the cash receipts journal both must have columns headed with the control account name.

98. Multiform Original Record as a Journal.—It has been previously mentioned that the use of bookkeeping machines and billing machines makes it possible to prepare duplicate or carbon copies of the customer's invoice. Where such mechanical appliances are utilized in connection with an accounting system, a carbon copy of the invoice serves as the sales journal record. The copy of the customer's invoice used for this purpose usually has holes punched on the left-hand side in order that the copies can be inserted in a binder daily. The carbon copies bound together daily become a chronological record of the sales and constitute the sales journal.

The use of this method does not lend itself very satisfactorily to the analysis of sales by commodities, departments, etc. The columnar sales journal is probably best where such analyses are desired. Here again the system man must decide which type of sales journal should be used. Where the volume of business transactions is sufficient, bookkeeping machines enable a saving to be made in time and cost, but where the number of sales transactions per month is too small to warrant the use of a machine and where detailed sales analyses are desired, the use of a columnar journal is preferable.

The necessity for sales analyses can be satisfied even though the multicopy style of sales journal is used. Tabulating equipment can be employed to make any type of analysis desired. All that is required is to have a tabulating card punched from each customer's invoice. Then the classification of sales from the invoices punched on the tabulating cards will give an accurate and detailed sales analysis according to any plan desired.

99. Establishing the Relationship Between Original Records and Journals. Assigning the responsibility for recording the transactions in the journals is one of the features of installing the accounting system described in Chapter XII, yet the responsibility must be recognized when the system designer is developing the original records, the journals, accounts, the ledgers, and the internal checks. The original records must be designed with either of the two following principles in mind. First, they must tie in with the journals in which the original-record information is transcribed. Second, the original records in multicopy form must be utilized as journal records.

100. Types of Journals.—Journal forms can be classified into several different groups, the principal ones being:

(*a*) Bound, with blank column headings.

(*b*) Bound, with printed column headings.

(*c*) Loose-leaf, with blank column headings.

(*d*) Loose-leaf, with printed column headings.

(*e*) Loose-leaf multicopy records.

The loose-leaf journal is more popular than the old-fashioned bound form, but the latter is less expensive. The loose-leaf form has advantages over the bound form in that it is usually easier to handle. When the loose-leaf binder becomes too heavy, the oldest records can be removed and filed away. The loose-leaf journal can be split up so that several individuals can work on it at the same time if need be. The argument most generally advanced in favor of the bound journal is that, unlike the loose-leaf journal, no sheets can be lost from it. The loss of loose-leaf records has been found, however, to be more theoretical than actual.

Blank column headings in a bound journal permit it to be utilized for any type of journal record by the insertion of any desired column headings. The advantage of a journal of this type is that the stock sizes are low priced, but it has the inconvenience that the column headings must be written in on each page.

Bound journals with printed column headings are expensive, because they are specially printed and bound on job orders. If loose-leaf journal sheets are ruled to order, the additional cost of inserting printed column headings is usually insignificant. Also, standard rulings for loose-leaf journals can be purchased and the column headings can be printed in at small cost.

The loose-leaf multicopy records are usually special printing jobs. The quality of paper, however, is much cheaper than that used in a regular journal. This tends to keep down the cost of journal records of this nature.

Information on the advantages, disadvantages, and the relative costs of various types of journals is of importance to the system designer. His recommendation regarding the type of journals to be used by an enterprise should be determined by the relative merits and cost of each.

101. Classification of Books of Original Entry.—Books of original entry are termed either journals or registers. It is obviously impossible to describe special forms of journals or registers for every type of business enterprise; therefore only the most generally used books of original entry are described in this chapter. If the principles of columniation and making the preliminary survey are understood, no difficulty will be encountered by the system man in designing any special type of journal. A classification of journals of a general nature used by a wide variety of business enterprises is as follows:

1. Journals and Registers Frequently Used:
   - (*a*) Voucher Register, Illustration 69.
   - (*b*) Check Register, Illustration 70.
   - (*c*) Cash Disbursements Journal, Illustration 71.
   - (*d*) Petty Cash Journal, Illustration 72.
   - (*e*) Sales Journal, Illustration 73.
   - (*f*) Cash Receipts Journal, Illustration 74.
   - (*g*) Income Register, Illustration 75.
   - (*h*) Factory Journal, Illustration 76.
   - (*i*) General Journal, Illustration 77.
   - (*j*) Journal Voucher, Illustration 78.
2. Journals and Registers Occasionally Used.
   - (*a*) Notes Receivable Register, Illustration 79.
   - (*b*) Notes Payable Register, Illustration 80.
   - (*c*) Capital Stock Subscription Journal, Illustration 81.
   - (*d*) Capital Stock Transfer Journal, Illustration 82.
   - (*e*) Sales Returns and Allowances Journal, Illustration 83.
   - (*f*) Purchases Returns and Allowances Journal, Illustration 84.

102. Voucher Register.—The underlying principle of columniation in the voucher register, as in all journals is the maintenance of the debit and credit equality. The main credit column is for accounts payable. The debit columns depend upon the type of voucher register to be used. The older type makes use of few or no expense control accounts, but has many columns for individual expense accounts. The newer type of voucher register has few individual expense account columns but numerous columns for expense control accounts. General-ledger columns should always be provided for the purpose of recording voucher adjustments and the miscellaneous expenditures that cannot be recorded under the specially headed columns provided. A form of the voucher register is shown in Illustration 69.

103. Check Register.—The check register is used in conjunction with the voucher register and records the payment of all vouchers in chronological order. The payment of each voucher is recorded in the voucher register where the record of payment is made in the Paid column. The debit and credit equality in the check register requires a debit column for the accounts payable control account and a credit column for cash. If the voucher register has no purchases discount column, the check register must contain such a column. Where the financial condition of the enterprise is such that discounts are taken on all invoices, the vouchers are prepared showing the net amount as the amount to be paid. The discount then should be listed in the purchases discount column in the voucher register. A form of check register is shown in Illustration 70.

VOUCHER REGISTER

Date		Voucher Payable To	Voucher Number	Paid		Accounts Payable (Control) Cr.	Merchandise Cost				Purchasing Expense (Control) Dr	Selling Expense Expense (Control) Dr	Administrative Expense (Control) Dr.	General Ledger			
				Date	Check Number		Purchases Dept. 1 Dr.	Purchases Dept. 2 Dr.	In Freight and Cartage Dept. 1 Dr.	In Freight and Cartage Dept. 2 Dr.				Debit	Credit	L. F.	Account
Apr.	2	Lemoyne-Fergus Co.	4000	4-12	2523	$ 968 67		$ 968 67									
	6	V. M. Pavlan	4001			69 70					$ 69 70						
	10	Drummond & Co.	4002			1,670 13	$1,670 13										
	13	Harry Ansell	4003	4-13	2524	117 45						$ 117 45					
	16	Paymaster	4004	4-17	2525	2,958 48					658 48	$1,581 70	$718 30				
	20	Baker Fixture Co.	4005			857 89								$857 89			Store Equipment
	22	P.M.RR.Co.	4006	4-22	2526	25 78								25 78			Store Equipment
	25	Macon-Mills, Inc	4007			117 65						117 65					
	28	Giles & Madden	4008			3,002 39		3,002 39									
	30	P.M.RR.Co.	4009	4-30	2527	88 56				$88 56							
						$9,876 70	$1,670 13	$3,971 06		$88 56	$728 18	$1,816 80	$718 30	$883 67			

ILLUSTRATION 60

CHECK REGISTER

Date		Check Payable to	Voucher Number	Check Number	Cash Cr.	Purchases Discount Cr.	Accounts Payable (Control) Dr.
Apr.	12	Lemoyne-Fergus Co.	4000	2523	$ 958 98	$ 9 69	$ 968 67
	13	Harry Ansell	4003	2524	117 45		117 45
	16	Paymaster	4004	2525	2,958 48		2,958 48
	22	P. M. RR. Co.	4006	2526	25 78		25 78
	30	P. M. RR. Co.	4009	2527	88 56		88 56
					$4,149 25	$ 9 69	$4,158 94

ILLUSTRATION 70

104. Cash Disbursements Journal.—The managements of some business enterprises of small size wish no voucher system to be used. If this is the case, the invoices and bills of creditors are not usually recorded until they are paid. This procedure necessitates the use of a cash disbursement journal which also serves as an expense distribution journal. Columns are provided for the expenses that occur with the greatest frequency. A form of a cash disbursements journal of this type is shown in Illustration 71.

105. Petty Cash Journal.—Where the petty cash payments are authorized by the preparation of a petty cash voucher, a petty cash register or journal often is not used, and really is not needed. Some managers, however, desire a record of petty cash payments in journal form. Where a register is used it is easier to make an audit of the petty cash. On the other hand, additional work is required to record the petty cash payments in the petty cash book. The petty cash journal is usually not a journal in the sense that postings are made from it. Under the imprest system of handling the petty cash, a voucher is prepared which shows the distribution of the various amounts to the different accounts, as ascertained from the petty cash vouchers or from the petty cash journal. The voucher register is the book of original entry from which expense accounts are debited with petty cash expenditures. A petty cash register or journal is shown in Illustration 72.

106. Sales Journal.—A columnar sales journal is shown in Illustration 73. The basic debit and credit equality followed is a debit column for accounts receivable and a credit column for sales. These two columns can be amplified to any degree desired.

The amounts entered in the cash sales columns, marked with a *, are for informative or statistical purposes only. They are not required in the sales journal except for the purpose of providing a convenient method of ascertaining the total daily sales of all kinds. This information is sometimes desired by the management. It can be shown conveniently by transferring the column totals for cash sales from the cash receipts journal to the sales journal.

CASH DISBURSEMENTS JOURNAL

Date		Account	Explanation	L. F.	Cash Cr.	Purchases Dr.	Freight-in Dr.	Salaries Dr.	Store Expense Dr.	Office Expense Dr.	Postage Dr.	General Ledger Amount Dr.	General Ledger L. F.	General Ledger Account
Apr.	10	Kunkle Brothers	Invoice 3/31		$ 368 98	$368 98								
	13	D. & C. Rwy. Co.	Frt. bill 4/12		20 74		$20 74							
	15	Payroll	Apr. 1–15		1,300 50			$1,300 50						
	18	Campbell & Co.	Invoice 4/3		69 99					$69 99				
	20	Postmaster			15 00						$15 00			
	24	Valmers Supply Co	Invoice 3/13		389 20							$389 20		Office Equipment
	28	Jordan & Mills	Invoice 2/28		63 57				$63 57					
					$2,227 98	$368 98	$20 74	$1,300 50	$63 57	$69 99	$15 00	$389 20		

ILLUSTRATION 71

PETTY CASH JOURNAL

Date		Explanation of Payment	Petty Cash Paid Out Cr.	Store Expenses Dr.	Shipping Expense Dr.	Postage Dr.	Sundry Accounts Dr. Amount	Sundry Accounts Dr. Account
Mar.	5	Express on purchases	$ 2 78					
	8	Stamped envelopes	3 30			3 30	$ 2 78	Freight and Cartage In
	13	Cleaning supplies	1 95	$ 1 95				
	20	Express on shipping supplies	2 54		2 54			
	27	Cartage on office equipment	3 00				3 00	Office Equipment
			$13 57	$ 1 95	$ 2 54	$ 3 30	$ 5 78	

ILLUSTRATION 72

SALES JOURNAL

Date		Account	Invoice Reference	L. F.	Accounts Receivable Current (Control) (Dr.)	Accounts Receivable Lease 19__ (Control) (Dr.)	Sales Dept. 1 (Cr.)	Sales Dept. 2 (Cr.)	Lease Sales Dept. 1 (Cr.)	Cash Sales Dept. 1 *	Cash Sales Dept. 2 *	Total Cash Sales *	Total Daily Sales *
Feb.	1	N. K. Glowman	2001		$ 56 89		$ 56 89						$ 56 89
	2	B. G. Walton	2002			$250 00			$250 00				250 00
	26	Cash		√						$ 393 66	$ 478 00	$ 871 66	871 66
	27	O. J. Newby	2578		128 75			128 75					
	27	R. Y. Follen	2579			125 00			125 00				253 75
	28	Harry Fennell	2580		225 00		125 00	100 00					
	28	Cash		√						284 45	345 23	629 68	854 68
					$ 410 64	$ 375 00	$ 181 89	$ 228 75	$ 375 00	$ 678 11	$ 823 23	$ 1,501 34	$ 2,286 98

ILLUSTRATION 73

CASH RECEIPTS JOURNAL

Date		Account	Explanation	L. F.	Cash Dr.	Sales Discount Dr.	Accounts Receivable Current (Control) Cr.	Accounts Receivable Lease 19__ (Control) Cr.	Cash Sales Dept. 1 Cr.	Cash Sales Dept. 2 Cr.	General Ledger (Cr.)	Bank Deposit
May	3	Henry Cantor	Payment on account		$ 57 82	$ 58	$ 58 40					$ 107 82
	3	H. F. Kaufman	Payment on account		50 00		50 00					120 00
	8	Jacob Jones	Payment on account		20 00			$ 20 00				
	8	M. Ditmen	Payment on account		100 00			100 00				
	13	Cash Sales		✓	356 90	96	96 40		$200 00	$156 90		452 34
	13	D. E. Milton	Payment on account		95 44						$1,000 00	
	20	Notes Receivable	Jones & Merrick		1,000 00						1,000 00	
	20	Notes Receivable	Milroy Jenkins		1,000 00						10 00	
	20	Interest Income			10 00							
	31	Cash Sales		✓	432 55				232 50	200 05		2,010 00
					$3,122 71	$ 1 54	$204 80	$120 00	$432 50	$356 95	$2,010 00	$3,122 71

ILLUSTRATION 74

107. Cash Receipts Journal.—The basic principle of debit and credit equality applicable to the cash receipts journal is to provide for a cash debit column, and credit columns for the sources of the receipts. There is usually an additional debit column for sales discount. The number of credit columns depends upon the nature of the business enterprise. The most commonly used titles for credit columns are: accounts receivable, cash sales, capital stock subscribers, notes receivable, interest earned, and general ledger. Some cash receipts journals also have columns, not affecting the debit and credit equality scheme, for the purpose of listing bank deposits and the cash balance in the bank. Columns of this type are for informative purposes only. A form of a cash receipts journal is shown in Illustration 74.

The bank deposit column, when used, furnishes a valuable reference and is of assistance in connection with the internal check over the cash receipts.

108. Income Register.—Income registers or journals are often used in business enterprises other than those engaged in commercial and industrial pursuits. Income that is not in the form of merchandise sales is usually shown in income registers. Construction contracts and professional services are sources of incomes which are recorded in income registers. The columns for such a register can be combined with the cash receipts journal, or they can form a separate journal. Where no cash receipts columns are shown, the income register is practically identical with the sales journal of an ordinary business. A form of the income register for an engineering construction and consulting concern is shown in Illustration 75.

INCOME REGISTER

Date		Account Explanation	L. F.	Account Receivable (Control) Dr.	Construction Contracts (Control) Cr.	Consulting Services Cr.
June	9	Newark Dredging Co.		$ 5,000 00	$ 5,000 00	
	15	Maryland Wharf & Dock Co.		1,000 00		$1,000 00
	24	H. K. Furman Co.		10,768 90	10,768 90	
	30	Bronson & Millwright		2,500 00		2,500 00
				$19,268 90	$15,768 90	$ 3,500 00

ILLUSTRATION 75

109. Factory Journal.—The factory journal is used in connection with factory cost systems. It is sometimes displaced by factory journal vouchers. A factory journal form (Illustration 76) is shown for the purpose of illustrating the debit and credit equality principles involved.

If the manufacturing company operates a factory ledger with a reciprocal control account, two General Ledger control account columns (one for debits and one for credits) must be provided in the factory journal. The corresponding reciprocal control account, Factory Ledger (Credit) column at the main office

GENERAL JOURNAL

Date		Account and Explanation	L. F.	Accounts Payable (Control) Dr.	General Ledger Dr.	Accounts Receivable Current (Control) Cr.	Accounts Receivable Lease 19__ (Control) Cr.	Accounts Receivable Lease 19__ (Control) Cr.	General Ledger Cr.
Jan.	9	Notes Receivable			$2,000 00				
		H. M. Deerman				$2,000 00			
		60 day 6% note received in settlement of account							
	16	Parkman & Wallace		$3,500 00					
		Notes Payable							$3,500 00
		30 day note, 6%, given in settlement of account							
	23	Deferred Gross Profit, Lease Sales			200 00				
		Repossessed Inventory			200 00				
		Babcock & Myers					$400 00		
		To close the balances from all accounts affected by the repossession of goods upon which a default of payment occurred							
				$3,500 00	$2,400 00	$2,000 00	$ 400 00		$3,500 00

ILLUSTRATION 77

FACTORY JOURNAL

Date		Account Explanation	L. F.	Work In Process Inventory (Control) Dr.	Manufacturing Overhead Expense (Control) Dr.	Finished Goods Inventory (Control) Dr.	Work In Process Inventory (Control) Cr.	Stores Inventory (Control) Cr.	General Ledger Debit	General Ledger Credit	General Ledger L. F.	General Ledger Account
Aug.	3	Factory supplies			$ 345 20			$ 345 20				
	10	Raw materials		$ 5,377 98				5,377 98				
	14	Factory supplies			219 34			219 34				
	20	Raw materials		4,200 34				4,200 34				
	31	Direct labor		10,455 39						$10,455 39		Factory Payroll
	31	Indirect labor			1,789 09					1,789 09		
	31	Depreciation			3,045 55					3,045 55		Reserve for Depreciation
	31	Taxes			350 00					350 00		Reserve for Taxes
	31	Insurance			100 00					100 00		Prepaid Insurance
	31	Overhead expenses		5,849 18						5,849 18		Manufact'ng Overhead Expense
	31	Cost of finished goods shipped							$13,452 90			Cost of Sales
	31	To transfer the cost of production				$14,880 00	$14,880 00			13,452 90		Finished Goods Inventory
				$25,882 89	$5,849 18	$14,880 00	$14,880 00	$10,142 86	$13,452 90	$35,042 11		

ILLUSTRATION 76

would be in the voucher register. The general journal at the main office would also have a debit column and a credit column for the Factory Ledger control account.

110. General Journal.—If journal vouchers are not used to record all the miscellaneous transactions that can not be properly entered in any of the other special journals, a general journal is required in the accounting system. The miscellaneous transactions entered in the general journal or on journal vouchers include the opening, adjusting, and closing entries. If there are no notes receivable, notes payable or sales returns and allowance journals, the general journal provides for the entry of notes received, notes issued, and goods returned by customers. A general journal form is shown in Illustration 77. Usually separate columns are not required for expense control accounts because of the infrequent occurrence of transactions of a miscellaneous nature which affect the expense accounts. An analysis of the transactions will reveal the necessity for expense control-account columns.

111. Journal Voucher.—Journal vouchers, as substitutes for the general journal, are used in many modern accounting systems. The journal voucher can be made in such form as to serve as a loose-leaf journal sheet. The journal vouchers when inserted in a binder thus form the general journal. Journal vouchers may, but they usually do not, have columns labeled with account names. Two money columns for debits and credits are usual. With this type of journal voucher, if a control account is affected, the journal entry must show both the control account name and the subsidiary account name. This is required for the purpose of making the posting to the control account agree with the posting to the subsidiary ledger. A form of journal voucher is shown in Illustration 78.

JOURNAL VOUCHER

Department 1

Journal Voucher 1-461

January 3 19

Code	Name Explanation	Debit		Credit	
11060	Reserve for Bad Debts	$42	73		
1106	Accounts Receivable Current			$42	73
	To write off the account of J. M. Shanks which has proven to be uncollectible.				

Journal entry prepared by *J. K.*

Journal entry approved by *M. E.*

ILLUSTRATION 78

112. Notes Receivable Register.—Where a large number of notes are received each month in settlement of customers' accounts, it is a good policy to make use of a notes receivable register. The basic double entry equality principle involved in

this journal is to have a debit control account column for notes receivable and a credit control account column for accounts receivable. Where a notes receivable register is used, the information shown in Illustration 59 (Record of Notes Received) is sometimes included in the register. Illustration 79 shows a notes receivable register without this information.

NOTES RECEIVABLE REGISTER

Date		Account	Terms	Folio	Notes Receivable (Control) Dr.		Accounts Receivable (Control) Cr.		Notes Receivable (Control) Cr.*	
Jan.	5	H. L. Morgan	6% 60 days		$1,500	00	$1,500	00		
	11	Murdock & Meyers	6% 90 days		689	60	689	60		
	20	B. V. Moore	6% 30 days		2,000	00	2,000	00		
					$4,189	60	$4,189	60		

*This column is used if it is desired to record the renewal of notes receivable.

ILLUSTRATION 79

113. Notes Payable Register.—The issuance of more than twelve or fifteen notes a month would warrant the adoption of a notes payable register one form of which is shown in Illustration 80. The data shown in Illustration 58 (Record of Notes Issued) could be incorporated in the notes payable register, but such data are not shown in Illustration 80.

NOTES PAYABLE REGISTER

Date		Creditor	Terms	Canceling Voucher Number	Folio	Accounts Payable (Control) Dr.		Notes Payable (Control) Cr.		Notes Payable (Control) Dr.*	
Jan.	10	Albright & Cox	6% 60 days	12345		$ 6,500	00	$ 6,500	00		
	19	Bowman Supply Co.	6% 30 days	11349		1,000	00	1,000	00		
	26	C. V. Sterrett	6% 45 days	12093		2,500	00	2,500	00		
						$10,000	00	$10,000	00		

*This column is used if it is desired to record the renewal of notes payable.

ILLUSTRATION 80

114. Capital Stock Subscription Journal.—A capital stock subscription journal may be used by a corporation that is just being organized or by one that is engaged in a stock selling campaign. The debit and credit equality principle in effect in the journal is a debit column for Subscribers' Capital Stock and a credit column for the Subscribed Capital Stock. Illustration 81 shows a form of this journal.

CAPITAL STOCK SUBSCRIPTION JOURNAL

Date		Name of Subscriber	No. of Shares	Folio	Subscribers' Capital Stock Class A (Control) Dr.		Subscribed Capital Stock Class A Cr.	
Sept.	3	Fred J. Knorr	100		$10,000	00	$10,000	00
	11	Mrs. V. B. Goodman	40		4,000	00	4,000	00
	18	Nathaniel Hood	65		6,500	00	6,500	00
					$20,500	00	$20,500	00

ILLUSTRATION 81

115. Capital Stock Transfer Journal.—Most large corporations engage a bank or a trust company to act as their capital stock transfer agent. The corporation may handle its own transfer of stock certificates, and where it does, a journal is used that is different from the usual run of journals. It has no money columns, since the transfer usually takes place between two stockholders for a monetary consideration between them and not the corporation. The stock transfer journal is for the purpose of recording the change of stockholders in the corporation. A form of the transfer journal is shown in Illustration 82.

CAPITAL STOCK TRANSFER JOURNAL

Date		Certificate Number	Number of Shares	Folio	Name of Holder	Date		Certificate Number	No. of Shares	Folio	Name of Holder
Mar.	16	344	50		Max Showman	Mar.	16	415	30		Max Showman
	29	211	100		H. A. Ashman			416	20		Mary E. Goldman
							29	421	50		H. A. Ashman
								422	50		Harry K. Marion

ILLUSTRATION 82

116. Sales Returns and Allowances Journal.—When a number of sales returns and allowances transactions occur each month, a sales returns and allowances journal should be one of the books of original entry. The principle of debit and credit equality involved in this journal is a debit column for sales returns and allowances and a credit column for accounts receivable. If a perpetual inventory is maintained at cost price, another debit column must also be provided. Such a column is necessary in order to show the value of any returned goods that are saleable, and are again placed in the inventory. A debit column for the perpetual inventory would also require a credit column for cost of shipments returned to provide for the necessary double entry at cost-price figures. Illustration 83 shows the sales returns and allowances journal without the columns for cost prices.

SALES RETURNS AND ALLOWANCES JOURNAL

Date		Customer	Explanation	Folio	Accounts Receivable (Control) Cr.		Sales Returns and Allowances Dr.	
Feb.	4	Hodges & Held	Credit Memo 45		$ 2	39	$ 2	39
	9	N. O. Laymond	" " 46		20	00	20	00
	21	G. G. Freeman	" " 47		13	59	13	59
					$ 35	98	$ 35	98

ILLUSTRATION 83

117. Purchases Returns and Allowances Journal.—In Illustration 84, is shown a form for a purchases returns and allowances journal. Usually, where a voucher system is in use such a journal is not required, as purchases returns and allowances are then generally accounted for on adjusted or newly prepared vouchers, and these are recorded in the voucher register.

PURCHASES RETURNS AND ALLOWANCES JOURNAL

Date 19—		Creditor	Explanation	Folio	Accounts Payable (Control) Dr.		Purchases Returns and Allowances Cr.	
Jan.	8	Noble Supply Co.	Allowance for breakage		$ 13	56	$ 13	56
	19	Merrick & Mills	Returns on their credit memo 445		20	78	20	78
					$ 34	34	$ 34	34

ILLUSTRATION 84

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) (*a*) What are the factors that determine the number of journals required for the successful operation of an accounting system?

(*b*) What are the principles that determine the number of columns required in designing any given journal?

(*c*) In the designing of books for a new accounting system, what conditions should be considered in choosing titles for the various columns of the journals?

(2) Comment upon the principles of columniation in connection with the voucher register and check register.

(3) (*a*) Under what conditions would a notes receivable register and a notes payable register be considered as necessary books of original entry in an accounting system?

(*b*) Under what conditions would it be considered necessary to design a capital stock transfer journal to be used in an accounting system?

(*c*) Under what conditions would it be advisable to make use of a sales returns and allowances journal when designing an accounting system?

Retain your answers and continue with the study of the next chapter.

CHAPTER XI

BOOKS OF SECONDARY ENTRY

118. Purpose of Books of Secondary Entry.—A book of secondary entry is another term for the word, ledger. The purpose of any ledger is to record transactions, in the chronological order of their occurrence, under specific headings or titles. The transactions are first entered in the proper journals, and then are transferred to the ledger by the posting process. A ledger contains an analysis of the business transactions in accordance with the classification of accounts designed for the system.

The ultimate purpose of the ledger or ledgers, when subsidiary records are required, is to provide for an analysis of business transactions. The debit and credit balances in the general ledger accounts are used to prove that the ledger is in balance. The trial balance, at the end of each month, after all postings are completed, provides the information needed for the preparation of the monthly statements.

The preparation of operating and financial statements is dependent upon the analysis of transactions in account form. All of the month's business activities are condensed into total amounts under concisely named accounts, which fit into the regular forms of the statements devised for the particular business enterprise. Without a balanced ledger, the monthly statements cannot be prepared. Without condensed summaries of transactions, which the accounts furnish, monthly statements would be clumsy or unintelligible. An understanding of these two basic purposes of accounts that form the ledger or ledgers is necessary to the system designer because the preparation of accurate statements is the chief reason why accounting systems are installed and operated. In designing an accounting system, the question should be constantly in mind, from the first step to the completion of the system, how will the various phases of the system combine to furnish statements with accuracy, economy, and dispatch? The ledger is the dividing line between the collecting and the recording of the original entries on the one side, and the summarizing and presenting of the transactions in statement form on the other.

In discussing the system-building process up to this point, emphasis has been placed upon the description of the collecting and recording of the business transactions. This has involved a description of internal checks, original records, and journals. This chapter is devoted to the significance of ledgers in the accounting system. The remaining chapters describe the installation of the complete accounting system and the uses made of it in the furnishing of data for accounting statements and statistical reports.

The importance of ledgers, as media for summarizing the business transactions in account form for statement and report purposes, is seen in the several basic func-

tions which they perform. These functions should be borne in mind, when designing a system, in order that the transactions may be summarized rapidly, economically, and logically for the use which is to be made of the data. The requisites of an accounting system pertaining to the ledgers used are as follows:

(*a*) There must be a general ledger in which are kept the accounts from which monthly trial balances are prepared.

(*b*) There are usually auxiliary or subsidiary ledgers or records which are controlled by representative accounts in the general ledger.

(*c*) There should be an orderly arrangement of accounts in both the general and subsidiary ledgers that will tie in with the order in which the account balances are made use of in the preparation of certain statements and statistical reports.

(*d*) There should be established, where advisable, ledger records which accumulate the daily account balance of each account.

(*e*) There must be a relationship established between certain journals and ledgers whereby certain responsibilities can be assigned to certain parties.

119. Nature of the General Ledger.—The purpose of the general ledger is to contain the accounts used for trial balance purposes. In a small concern, the general ledger usually contains all of the accounts needed to account for the transactions in the proper fashion. In a larger concern, the general ledger contains numerous control accounts which eliminate large numbers of detailed accounts of a like nature. It is impossible to make a general statement as to exactly what accounts should be found in a general ledger. The nature of the business transactions in each business enterprise dictates what control accounts are needed. With the use of each additional control account in an accounting system, there is a decrease in the number of individual general ledger accounts.

The use of an accounts receivable control account eliminates all customers' accounts from the general ledger. The use of inventory control accounts provides for the showing of the detailed stock items in an inventory ledger instead of in the general ledger. When equipment ledgers are maintained, only the control accounts for buildings, machinery, automobiles, etc., are shown in the general ledger. The use of a voucher system or an accounts payable ledger, eliminates the existence of individual creditors' accounts in the general ledger. The capital stock account is a control account which precludes the necessity of having accounts in the general ledger for individual shareholders. The cost accounts can be controlled by a general ledger control account, Factory Ledger. Various expense groups such as selling expenses, administrative expenses, other or financial expenses, similarly can be handled by control accounts in the general ledger. The general ledger may be described as a book that contains all the accounts except the detailed accounts controlled by the control accounts.

120. Nature of Subsidiary Ledgers.—Subsidiary ledgers are special ledgers in which are kept the detailed accounts of certain classifications controlled by general ledger control accounts. Examples are customers' accounts, creditors' accounts, factory cost accounts, selling expense accounts, administrative expense accounts, etc. One of the particular duties of the system designer is to work out the details of the required control accounts, and to design the subsidiary records. The subsidiary record can be a regular ledger form or any other design that will best provide for a record of the detailed information. A number of forms of subsidiary ledgers are shown in the illustrations at the close of this chapter.

121. Arrangement of Accounts in the General Ledger.—In the designing of an accounting system, some thought should be given to the arrangement of accounts, as they relate to other phases of the system. It must be remembered that the accounts are maintained for the purpose of accumulating balances that are used for statement and report purposes. Accounting statements and statistical reports are prepared at periodic intervals in certain prescribed forms. The items contained in the statements and reports should be shown in exactly the same order each time an occasion requires their preparation. By conforming with this principle the making of comparative analyses is facilitated.

The arrangement of the accounts in the general ledger and in the subsidiary ledgers should, where possible, conform with the order in which these accounts are used in the statements and reports. Some examples will make this principle clear. The accounts in the general ledger should be arranged in five general classifications namely, assets, liabilities, proprietorship, incomes, and expenses.

The balance sheet accounts should be arranged in the ledger as follows:

(*a*) Assets
- (1) Current
- (2) Deferred charges to operations
- (3) Fixed

(*b*) Liabilities
- (1) Current
- (2) Deferred credits to operations
- (3) Long term

(*c*) Proprietorship

The current asset accounts should be arranged in the order of their liquidity, that is, cash, notes receivable, accounts receivable, inventory, etc. Valuation reserves for doubtful accounts, inventory losses, depreciation, and depletion are best included after the asset accounts to which they are related.

Current liability accounts are customarily arranged in the order of notes payable, accounts payable, and accruals payable. Current liability reserves should be included with the current liability group. Operating reserves are sometimes shown under a separate grouping with the heading of "Operating Reserves"

between the current liability group and the group classified as deferred credits to operations.

Proprietorship accounts include the owners' capital accounts if the business is a sole proprietorship or partnership. The capital accounts in both types of business organization should be accompanied by the owners' personal or drawing accounts. The general ledger of a corporation should list first, in the proprietorship group, the various capital stock accounts such as unissued capital stock, and capital stock (issued) of the various classes. The capital stock accounts should be followed by the surplus and surplus reserve accounts.

Account groups arranged in the general ledger in the order mentioned naturally appear in the same order in the monthly trial balances (assuming the use of a loose-leaf ledger). The work sheet, on which is shown the trial balance, then, presents the balance sheet items and amounts in the order that they are used in the preparation of the regular form of financial statement.

In some enterprises where the fixed-asset group of accounts represents a property investment in excess of the current-asset group, the fixed-asset group precedes the current-asset group of accounts in the ledger as well as on the balance sheet. Public utilities, real estate companies, and some natural-resources enterprises are examples of concerns where this balance sheet arrangement is used. The reason for the order is that the fixed-asset investment is in excess of the total current-asset values and it is thought best that the more important group, from a valuation viewpoint, should appear first.

The operating accounts should follow the balance-sheet accounts in the ledger. The operating or profit and loss accounts should be arranged as follows:

(*a*) Operating income accounts.

(*b*) Operating expense accounts.

(*c*) Other income accounts.

(*d*) Other expense accounts.

The operating income account group for trading and industrial concerns should include the various sales and sales returns and allowances accounts. The nature of the business enterprise determines the names of the accounts that represent the chief sources of income. The principal operating incomes of a bank are interest, discounts, exchange, and safe-deposit box rentals. In a hospital, the principal income items are receipts from patients for room rent, board, operating-room fees, equipment-room fees, and nursing fees. An analysis of the business transactions during the preliminary study for system installation purposes will disclose the operating income accounts needed.

Operating expense accounts should be classified by the various divisions or groups of expense items found to exist within the business, and should be arranged accordingly in the ledger. Often the operating expense accounts in the general ledger are but the control accounts, as for example, Selling Expense and Administrative Expense.

Other income accounts represent all of the miscellaneous and incidental income items that cannot be classified as operating incomes. These items vary in different types of enterprises. For example, interest earned in a banking institution represents operating income, but in a trading or manufacturing establishment interest earned is an incidental item.

Other expense accounts represent all miscellaneous and incidental expense items that do not come under the classification of ordinary operating expenses. In a trading or manufacturing concern, they are such items as interest expense and sales discount.

The arrangement of the profit and loss accounts in the ledger in the order of operating income and expense, and other income and other expense is for a purpose. The general ledger operating accounts are arranged in the order of their use in the preparation of the profit and loss statement from the work sheet.

The time taken by the system designer in the development of a chart of accounts and an account code system is time well spent. The chart of accounts is usually used as the basis for the arrangement of the accounts in the general ledger.

A trial balance book is sometimes used in conjunction with the general ledger. It is a book with account name and code number columns at the extreme left-hand side of the page, and pairs of money columns to the right of the account-name column. The names of the accounts appear in the trial balance book in their classified order. The pairs of money columns are used to record the trial balances for successive months. The trial balances thus become a permanent record.

122. Arrangement of Accounts in the Subsidiary Ledgers.—Statement schedules and statistical reports are often prepared on a printed form which lists the account names in a systematic order. The accounts used in the preparation of the schedules and reports should be arranged in the subsidiary ledgers, where possible, in the order in which they are used or arranged in the statement schedules and statistical reports. Such an arrangement makes for economy of time and reduction of errors in transcribing the account balances from the subsidiary ledgers to the schedules and reports.

The accounts receivable ledger usually has the customers' accounts arranged in alphabetical order. This arrangement is for the sake of convenience in locating a particular account. Accounts with customers may run into the thousands depending upon the size of the concern.

The stores ledger or the finished goods ledger usually has the individual stock items arranged in the numerical order of the stock items. The stock items may also have a departmental code classification or a commodity classification. The standard practice of a trade association may be followed, or the desire of the management may be considered in the arrangement of the inventory items.

The equipment ledger accounts are usually arranged first by asset groups, such as buildings, machinery, automobiles, office furniture and fixtures. Within each group, the ledger record for each unit of equipment is arranged in the numerical

sequence of the date of its acquisition. If an accounting system is being installed in a going concern, the equipment ledger accounts, for a particular fixed-asset group, can be arranged by nature of the items or by the items within departments. An important principle is to mark each unit of equipment with a code number which identifies the unit with its property ledger record.

Capital stock ledger accounts are generally arranged in the alphabetical order of the stockholders' names. In the absence of a capital stock ledger, the capital stock certificate stub becomes the subsidiary record.

Where a factory ledger is used, the cost accounts are generally arranged in the order of their use in the preparation of the manufacturing cost statements and reports. The factory ledger may contain the various individual manufacturing overhead expense accounts or it may have a control account for them. Regardless of where the factory overhead expenses are kept, in the factory ledger or in a secondary subsidiary ledger, they should be arranged in the order of their use in statement schedules or statistical reports.

The accounts of any other expense account subsidiary ledger should be arranged in the order in which they appear in statements or reports.

123. Providing for Daily Accumulation of Ledger Account Balances.—To have an account balance available at any time it is desired, is often worth while. Inventory ledgers, accounts receivable ledgers, depositors' ledgers, and similar subsidiary ledgers can show the daily accumulated balances with no difficulty where bookkeeping machines are used. Where accounts are not kept with the aid of mechanical appliances, the daily balances can be shown, but with greater effort and expenditure of time, by using ledger sheets having a balance column.

The accumulation of daily balances within subsidiary ledgers makes it possible to have the final balance in each subsidiary account at the end of each month for control account verification. Knowledge of the subsidiary ledger account balances speeds the process of monthly statement preparation, where it is necessary to verify the control account balances in the event of failure to obtain a balanced trial balance.

124. Establishing Relationship Between Journals and Ledgers.—One of the jobs of the system designer is the assignment of the responsibility for the posting processes. The system man may not actually assign the responsibility of posting from certain journals to certain ledgers, he may only suggest it. The parties who are to handle the postings from the journals to the ledgers should be made acquainted, not only with the mechanical details of their specific duties, but also with the effect of their work on statements, reports, and other phases of the system. A broad and extensive knowledge of the operation of the entire accounting system will enable each individual to contribute his best efforts. There are exceptions to this statement especially in a large enterprise or in a complicated system. A comprehensive understanding of the entire system by the majority of employes, however, will help toward a smoothly operated accounting system.

Some of the relationships between journals and ledgers are as follows:

(*a*) General ledger and the following journals from which postings are made to the general ledger accounts:
- (1) Voucher register.
- (2) Check register.
- (3) Sales journal.
- (4) Sales returns and allowances journal.
- (5) Cash receipts journal.
- (6) General journal.
- (7) Other special journals in accordance with the nature of the accounting system.

(*b*) Accounts receivable ledger and the:
- (1) Sales journal
- (2) Cash receipts journal.
- (3) Sales returns and allowances journal.
- (4) General journal.

(*c*) Stores inventory ledger and the:
- (1) Voucher register.
- (2) Factory journal.
- (3) General journal.

(*d*) Equipment ledger and the:
- (1) Voucher register.
- (2) Factory journal.
- (3) General journal.

(*e*) Factory ledger and the:
- (1) Voucher register.
- (2) Factory journal.
- (3) General journal.

(*f*) Expense ledgers and the:
- (1) Voucher register.
- (2) General journal.

125. Types of Ledgers.—Ledger forms can be classified broadly into the bound type and the loose-leaf type. Both types are widely used. The bound form is used more by small businesses, while the loose-leaf type is generally found in large concerns. The initial cost of a loose-leaf ledger is greater than that of the other type, but its many advantages more than offset the difference in cost. The chief advantages of the loose-leaf form are two in number. First, the ledger sheets can be removed as they are filled and new ones inserted without destroy-

ing the account code number sequence in the ledger. Second, a good loose-leaf binder lasts for years, and the payment for the heavy covers of a bound ledger every time a ledger is purchased is eliminated.

There are many ledger rulings each designed for a different purpose. General ledger rulings are usually one of three types. The most common form is the one in which the dividing line in the center of the page separates the debit and credit sides of the account, both of which have identical rulings. This form of ledger sheet is shown in Illustration 85.

There are two other commonly used forms. One form has an extra debit and an extra credit column for carrying the running balance of the account as shown in Illustration 86. The other (Illustration 87) has a center money column used for showing balances, with the debit money column at the immediate left, and the credit money column at the immediate right. The folio, explanation, and date columns for the debit and credit sides are respectively at the extreme left and right sides of the money columns.

Ledger records do not necessarily conform to the conventional equibalanced debit and credit plan as shown in Illustrations 85, 86, and 87. There are many other peculiar forms, as for example, expense ledgers, inventory ledgers, equipment ledgers, and capital stock ledgers, illustrations of which are shown further on in this chapter.

A ledger does not even need to be in the conventional bound or loose-leaf forms. It may take the form of loose cards kept in a card file, as is often the case in inventory ledger records or plant equipment records.

Another commonly used form of ledger record which differs radically from the conventional type is the expense distribution sheet form. The expense distribution sheet, as shown in Illustration 89, is used in conjunction with a voucher register that contains expense control account columns. The voucher prepared from the invoice shows the specific expense account to be debited as well as the expense control account. The amount of the voucher is entered in the voucher expense control account column of the register, and the same amount is recorded in the specific expense account in the expense distribution sheet. The expense distribution ledger record dispenses with the regulation equibalanced debit and credit form of ledger record. The distribution ledger form dispenses with the credit column for each expense account. This results in a saving of space, hence paper, which amounts to a saving of money. If the necessity arises for entering a credit adjustment in this form of ledger, it is entered in the debit column in red ink and is treated as a deduction from the black ink items when the monthly total is made. Each month a new expense distribution sheet form is used, and the previous month's sheet is filed away as a permanent record. The summary of the balances in the various expense accounts, at the end of each month, is transferred to a comparative expense ledger record, which is shown in Illustration 90.

126. Classification of Books of Secondary Entry.—Ledgers can be classified by their form or peculiar rulings some of which were described in the preceding article. The classification given here, as related to system installation, is on the

basis of the frequency of the use of the various ledgers. In each case the illustration or illustrations referred to show the forms commonly used. The classification is as follows:

BOOKS OF SECONDARY ENTRY

I. Ledgers Used by Trading and Industrial Concerns.
- *A.* Ledgers always used.
  - (1) General Ledger (Illustrations 85 and 86).
- *B.* Subsidiary Ledgers generally used.
  - (1) Customers' Ledgers.
    - (*a*) Current accounts (Illustration 87).
    - (*b*) Lease accounts (Illustration 88).
  - (2) Expense Ledgers.
    - (*a*) Conventional form (Illustration 85).
    - (*b*) Distribution sheet form (Illustration 89).
    - (*c*) Comparative Expense Ledger (Illustration 90).
  - (3) Inventory Ledgers.
    - (*a*) Merchandise Inventory Ledger (Illustration 91).
    - (*b*) Merchandise Inventory Stock Card (Illustration 92).
    - (*c*) Merchandise Stock Card (Illustration 93).
    - (*d*) Stores Inventory Ledger (Illustration 94).
- *C.* Subsidiary Ledgers occasionally used:
  - (1) Equipment Ledger (Illustration 95).
  - (2) Accounts Payable Ledger (Illustrations 85, 86, or 87).
  - (3) Factory Cost Ledger (Illustration 85.)
  - (4) Job Order Cost Ledger (Illustration 96).
  - (5) Capital Stock Ledger (Illustration 97).
- *D.* Subsidiary Ledgers infrequently used.
  - (1) Capital Stock Subscribers' Ledger (Illustration 98).
  - (2) Private Ledger (Illustration 85).

II. Subsidiary Ledgers Used by Other Than Trading and Industrial Concerns.
- *A.* Banks.
  - (1) Depositors' Ledger (Illustration 99).
- *B.* Real Estate Agencies.
  - (1) Tenants' Ledger (Illustration 100).
- *C.* Hotels and Clubs.
  - (1) Guests' Ledger (Illustration 101).
- *D.* Clubs, Lodges, Unions, and Churches.
  - (1) Members' Ledger (Illustration 102).

E. Hospitals, Sanitariums, and Charitable Institutions.
(1) Patients' Ledger (Illustration 103).
F. Professional Men.
(1) Patients' Ledger (Illustration 104).
(2) Clients' Ledger (Illustration 105).
G. Political Subdivisions.
(1) Appropriation Ledger (Illustration 106).

127. Ledgers Used by Trading and Industrial Concerns.—The forms and uses of the general and subsidiary ledgers mentioned in the foregoing list will now be briefly referred to.

General Ledger.—Little need be said about the general ledger, so well known to all accountants and bookkeepers. Two forms are shown: the conventional one with debit and credit money columns, Illustration 85; and, one with running balance columns in addition to the debit and credit columns, Illustration 86.

GENERAL LEDGER CONVENTIONAL ACCOUNT FORM

ILLUSTRATION 85

GENERAL LEDGER ACCOUNT FORM WITH RUNNING BALANCE COLUMNS

Debit postings	Debit balances	Credit postings	Credit balances

ILLUSTRATION 86

Subsidiary Ledgers for Customers.—The ledger with center balance column (Illustration 87) is often used for accounts receivable, and for accounts payable when these accounts are kept.

CURRENT ACCOUNT LEDGER FORM WITH CENTER BALANCE COLUMN

Debit postings	Balances	Credit postings

ILLUSTRATION 87

Lease accounts for customers buying goods on the installment plan are often shown in forms especially ruled or designed as shown in Illustration 88. The information listed on such an account form is helpful in keeping an adequate record of installments due and paid. A form of this nature is also an aid in making the necessary adjusting entry in event the goods are repossessed because of failure of the customer to make the proper payments.

LEASE ACCOUNT FORM

Customer's Name Mrs. L. C. Morgan — Lease Number 3126

Address 1411 Milton Street — Date of Purchase Jan. 16, 19—

Description of items purchased	Cost Price		Gross Profit		Selling Price	
No. 181 Merit Washing Machine	$ 56	00	$ 40	00	$ 96	00
Total	$ 56	00	$ 40	00	96	00
Down Payment					12	00
Balance due					84	00
Interest charges					none	
Total due					$ 84	00

Number of months balance to be paid 12

Amount due on 16th day of each month 7.00

Date	Payment Due		Amount Received		Balance Due		Payment Received
Feb. 16, 1933	$ 7	00	$ 7	00	$ 77	00	Feb. 15, 1933
Mar. 16, 1933	7	00					
Apr. 16, 1933	7	00					
May 16, 1933	7	00					
June 16, 1933	7	00					
July 16, 1933	7	00					
Aug. 16, 1933	7	00					
Sep. 16, 1933	7	00					
Oct. 16, 1933	7	00					
Nov. 16, 1933	7	00					
Dec. 16, 1933	7	00					
Jan. 16, 1934	7	00					

ILLUSTRATION 88

Expense Subsidiary Ledgers.—The conventional form of the expense ledger is the same as the general ledger form shown in Illustration 85.

The *distribution sheet* form of an expense ledger is shown in Illustration 89. A separate sheet is used each month for each different expense control account in use.

EXPENSE ACCOUNT DISTRIBUTION SHEET FOR SELLING EXPENSES

Month of January 19__

*5301		5302		5303		5309		5310		5311		5312	
Reference	Amount	Reference	Amount	Reference	Amount	Reference	Amount	Reference	Amount	Reference	Amount	Reference	Amount
V1100	$ 650 90	V1100	$ 289 78	V1100	$ 175 00	V1036	$ 66 20	V1028	$ 58 35	V1050	$ 37 50	V1022	$ 45 00
V1290	560 10	V1290	290 90	V1290	175 00	V1125	110 80	V1111	34 89	V1267	101 82		
						V1201	34 67			V1285	3 25		
	$1,211 00		$ 580 68		$ 350 00		$ 211 67		$ 93 24		$ 142 57		$ 45 00
5313		5314		5315		5316		5317		5318		5319	
V1048	40 00	V1258	121 11	V1237	103 75	V1234	200 65	JV100	20 00	JV101	18 90	V1199	85 90
	40 00		121 11		103 75		200 65		20 00		18 90		85 90
5321		5322		5323		5331		5332		5341		5342	
JV102	125 00	JV103	25 00	JV104	75 00	JV105	34 50	JV106	54 00	JV107	23 00	JV107	25 00
	125 00		25 00		75 00		34 50		54 00		23 00		25 00
5343		5350		5360		5361		5390					
JV108	101 50	V1098	4 35	V1132	500 00	V1005	3 42	VJ110	300 00				
		V1111	25 78	V1212	500 00	V1050	9 46						
	101 50		30 13		1,000 00		12 88		300 00				

*The names of the accounts applicable to the account code numbers are found in Illustration 90.

ILLUSTRATION 89

The *comparative expense ledger* sheet is shown in Illustration 90. To it are transferred the summaries of the individual accounts from the distribution sheet shown in Illustration 89. There must be a separate comparative expense ledger sheet for each expense control account. As the illustration shows, however, there is need for but one comparative record each year for each control account.

COMPARATIVE EXPENSE ACCOUNT LEDGER

Selling Expense — For the Year 19__

Account		Jan.	Oct.	Nov.	Dec.	Total
Code	Name					
5301	Salaries	$1,211 00				
5302	Shipping Dept. Wages	580 68				
5303	Drivers' Wages	350 00				
5309	Store Supplies	211 67				
5310	Shipping Supplies	93 24				
5311	Office Supplies	142 57				
5312	Delivery Truck Supplies	45 00				
5313	Postage	40 00				
5314	Telephone and Telegraph	121 11				
5315	Power	103 75				
5316	Heat	200 65				
5317	Water	20 00				
5318	Compensation Insurance	18 90				
5319	Delivery Truck Repairs	85 90				
5321	Depreciation, Equipment	125 00				
5322	Depreciation, Building	25 00				
5323	Depreciation, Delivery Truck	75 00				
5331	Repairs and Main., Equipment	34 50				
5332	Repairs and Main., Buildings	54 00				
5341	Insurance, Equipment	23 00				
5342	Insurance, Building	25 00				
5343	Insurance, Delivery Truck	101 50				
5350	Miscellaneous Expense	30 13				
5360	Advertising	1,000 00				
5361	Out Freight and Express	12 88				
5390	General Admin. Expense	300 00				
	Total	$5,030 48				

ILLUSTRATION 90

Inventory Subsidiary Ledgers.—Many styles of ledger forms for inventories are found in use. In general, the forms provide columns for information pertaining to the purchase order number, the receipts, the issues, and the balance at the end of the month. Sample forms are shown in Illustrations 91, 92, 93, and 94.

Illustration 91 provides only for a physical inventory record. Where the inventory ledger is of the design shown in Illustration 91, the quantity balance at the end of each month is carried over and considered with the quantity received and the quantity issued in the following month to arrive at the quantity balance for the following month. Where a record of this type is used, the perpetual inventory value is ascertained from a control account only, or the control account may be supplemented by the use of a retail inventory record. Another form of inventory record is shown in Illustration 92.

Illustration 93 shows a merchandise stock card with a perpetual valuation record as well as a quantity record.

A stores inventory ledger which also lists price and value information as well as quantity, is shown in Illustration 94.

MERCHANDISE INVENTORY LEDGER

Name of Item 12" White Shelf Paper, 30 ft. rolls Item No. 2305

Location of Item Household Department

Unit rolls Minimum 300 Maximum 1,500

January						February					
Ordered		Received		Issued Quantity	Balance Quantity	Ordered		Received		Issued Quantity	Balance Quantity
Quantity	Order No.	Quantity	Order No.			Quantity	Order No.	Quantity	Order No.		
1,500	A55	1,500	A55	900	600	1,200	B47	1,200	B47	1,300	500

Illustration 91

MERCHANDISE INVENTORY STOCK CARD

Item No. 2305 Item Name 12" White Shelf Paper, 30 ft. rolls

Location of Item Household Department

Unit rolls Minimum Point 300 Maximum Point 1,500

Ordered			Received Quantity	Issued Quantity	Balance Quantity
Date	Order No.	Quantity			
Jan. 4	A55	1,500	1,500	900	600
Feb. 5	B47	1,200	1,200	1,300	500

Illustration 92

Equipment Subsidiary Ledger.—The equipment ledger shown in Illustration 95, should be used by every concern that has numerous pieces of equipment, such as different buildings, units of machinery, pieces of furniture, and automobiles. Unfortunately, this ledger does not have the widespread use it should have. It serves a valuable purpose in furnishing information regarding the accumulated depreciation, original cost, etc., of each individual unit of equipment. This information is of value when any unit is scrapped or disposed of through sale or exchange.

Accounts Payable Subsidiary Ledger.—If an accounts payable ledger is used, the accounts may be recorded in any one of the three forms shown in Illustrations 85, 86, or 87.

MERCHANDISE STOCK CARD

Item No. 2305

Name of Item 12" White Shelf Paper, 30 ft. rolls

Location of Item Household Department

Maximum 1500

Unit rolls Minimum 300

Ordered			Received			Issued			Balance		
Date	Quantity	Order No.	Quantity	Price	Value	Quantity	Price	Value	Quantity	Price	Value
Jan. 4	1,500	A55	1,500	$.04	$60.00	900	$.04	$36.00	600	$.04	$24.00
Feb. 5	1,200	B47	1,200	.05	60.00	1,300	.0467	60.71	500	.0467	23.35

Illustration 93

STORES INVENTORY LEDGER

Stock Item Description ½"×2" Cotter Pins Stock Item No. 3275

Stores Location: 1st floor Section M Bin 2910

Maximum Stock 7000 Average Monthly Consumption 4000 Minimum Stock 500

Units 100 (Pkg.)

Ordered			Received						Issued						Balance				
Date	Requisition No.	Quantity	Date	Requisition No.	Quantity	Price			Date	Reference	Quantity	Price			Date	Reference	Quantity	Price	
						Unit	Total					Unit	Total					Unit	Total
Jan. 5	A71	5,000	Jan. 11	L86	4,000	$.10	$4.00	Jan. 16	SR66	2,000	$.10	$2.00	Jan. 16		2,000	$.10	$2.00
			Jan. 27	A71	5,000	.10	5.00	Jan. 29	SR11	4,000	.10	4.00	Jan. 27		7,000	.10	7.00
													Jan. 29		3,000	.10	3.00

Illustration 94

Factory Cost Subsidiary Ledger.—Factory cost accounts are usually kept in a ledger the ruling of which is that shown in Illustration 85.

Job Order Cost Subsidiary Ledger.—The operation of a job order cost accounting system usually involves the use of a Work In Process Inventory account, which controls a subsidiary record in the form of job order cost cards. The cost cards, upon which are entered the daily direct material and labor costs and the overhead expense charges, constitute the detailed records, and they should agree with the control account at the end of each month when the postings are completed. A form of a job order cost ledger card is shown in Illustration 96.

EQUIPMENT LEDGER

Name of Unit: Ford Truck — Unit Number: T16

Name of Control Account: Delivery Trucks — Control Account No.: 1305

Location of Unit: — Voucher Number: G 3

Purchased from: Norris Auto Sales Co. — Voucher Date: July 2 19

Invoice Price	$ 680	00	Estimated Life: 4 years
Freight Charges			Annual Depreciation Rate: 25%
Installation Charges:			Annual Depreciation Amount: 170.00
Labor			Monthly Depreciation Amount: 14.17
Material			
Total Cost	$ 680	00	
Less: Scrap Value			Date Discarded:
Amount to Depreciate	$ 680	00	Cash or Trade-In Value:

Date	Cost Amount Debit to Equipment Account		Annual Depreciation		Depreciation Reserve Accumulation		Repair Record	
							Date	Amount
July 2, 1931	$680	00						
Dec. 31, 1931			$ 85	00	$85	00		

ILLUSTRATION 95

Capital Stock Subsidiary Ledger.—A ledger form for a record of the number of shares and the numbers of the certificates held by each stockholder, is a peculiar form designed for this purpose only. Illustration 97 is self-explanatory.

JOB ORDER COST LEDGER

Job Order No. H1139

Raw Materials	Dept. A.		Dept. B.		Dept. C.		Total	
Jan. 11	$ 322	90	$ 290	80	$ 109	67	$ 723	37
15			210	20	56	76	266	96
	$ 322	90	$ 501	00	$ 166	43	$ 990	33
Direct Labor								
Jan. 11	35	90	45	70	15	25	96	85
12	35	90	45	70	25	00	106	60
13	30	00	60	00	45	50	135	50
14			32	00	50	00	82	00
	$ 101	80	$ 183	40	$ 135	75	$ 420	95
Overhead Expense								
110% Direct Labor Cost	111	98	201	74	149	33	463	05
	111	98	201	74	149	33	463	05
Total Cost	$ 536	68	$ 886	14	$ 451	51	$1,874	33
Total Pieces Produced	—		**Estimated Total Cost**				$1,900	00
Unit Production Cost	$1,874	33	**Under or ~~Over~~ Estimate**				$ 25	67

ILLUSTRATION 96

CAPITAL STOCK LEDGER

Name: Harry Daily

Address: 418 Burlington Ave.
New Haven, Conn.

Date	Transfer Journal Folio	Certificates Surrendered		Date	Transfer Journal Folio	Certificates Issued		Balance Shares
		No.	Shares			No.	Shares	
Jan. 3, 19__		261	100	Mar. 5, 19__		261	100	100
				Jan. 3, 19__		292	50	50

ILLUSTRATION 97

Capital Stock Subscribers' Subsidiary Ledger.—A ledger for recording the amount owed by each subscriber for subscriptions to the capital stock of a corporation may be used if there are a large number of subscribers. Illustration 98 shows the form.

CAPITAL STOCK SUBSCRIBERS' LEDGER

Name Edwin H. Mayfair

Address 6165 Rebecca St.
Pittsburgh, Pa.

Date	Subscription		Call		Cash Received on Call		Balance Value
	No. Shares	Value	No.	Value	No.	Value	
Jan. 5, 19__	100	$10,000	1	$4,000	1	$4,000	$6,000

ILLUSTRATION 98

Private Ledger Form.—A private ledger is used when the management wishes to keep certain accounts secret from the employes of the accounting department. The general ledger under this circumstance, maintains a control account, Private Ledger. In the private ledger, a reciprocal control account appears under the name of General Ledger. The customary general ledger account form, as shown in Illustration 85, is used for the private ledger accounts.

128. Subsidiary Ledgers Used by Other Than Trading and Industrial Concerns.—The subsidiary ledger forms described in the preceding paragraphs are common to many types of business enterprises classified as trading and industrial concerns. More specialized business establishments require other peculiar ledger forms. Some of the forms for banks, real estate agencies, hotels, clubs, etc., are shown in the accompanying illustrations, and the purpose of each is described in the following paragraphs. The form of ledger record for these enterprises depends upon whether or not a bookkeeping machine is used.

Depositors' Subsidiary Ledger Form.—The depositor's ledger account is usually a bookkeeping machine form. The original copy of the monthly deposits and checks drawn is given to the depositor, while the carbon copy is the bank's subsidiary ledger record. Illustration 99 shows the depositors' ledger account (bookkeeping machine form).

Tenants' Subsidiary Ledger.—A real estate agency which acts as a rental agent must have a record of the monthly rents due and receipts from the tenants who pay the rents to the agency. A form of such a ledger account is shown in Illustration 100.

DEPOSITORS' LEDGER

Depositor's Name Mrs. Lucy M. Corrigan
Address 1111 Lemington Ave.

Date	Debits (Checks paid)			Date	Credits (Deposits received)	
Jan. 11, 19__	$10	00	Balance	Jan. 1, 19__	$137	42
16	26	50				
				Jan. 28	100	00
			Balance	Jan. 31	$200	92

ILLUSTRATION 99

TENANTS' LEDGER FORM

Name of Tenant Geo. C. Brandon
Address of Tenant 4623 Highland Ave.
Name of Landlord J. A. Coulter
Address of Landlord 2121 Nash Place
Lease expires April 30, 19
Monthly rental $100.00
Final payment date with 5% discount allowed, 5th
Monthly commission allowed (Renting agent) 3%. Amount $3.00

	Year 19__			Year 19__			Year 19__		
Jan.									
Feb.									
Mar.									
Apr.									
May 3	$	95	00						
June 2		95	00						
July 4		95	00						
Aug. 10		100	00						
Sept. 1		95	00						
Oct. 3		95	00						
Nov. 5		95	00						
Dec. 4		95	00						
	$	765	00						

ILLUSTRATION 100

Guests' Subsidiary Ledger. Hotels maintain very simple ledger records for their guests. Some guest ledger records are kept by bookkeeping machines; others are kept by hand. A form is shown in Illustration 101.

HOTEL GUESTS' LEDGER

Mr. H. C. Heberton

Chicago, Ill. No. 18880

Date	Reference	Charges		Credits		Balance	
July 1, 19__	Room	$3	50			$3	50
1	Service	1	50			5	00
2	Restaurant	1	00			6	00
2	Room	3	50			9	50
2	Telephone		40			9	90
3	Cash			$9	90	0	00

ILLUSTRATION 101

Members' Subsidiary Ledger.—Accounts of individual members of clubs, lodges, unions, and churches, are quite similar. The ledger account contains space for the member's name, address, and the amount of the weekly, monthly, quarterly, or yearly dues, pledges, or subscriptions. Illustration 102 shows a form of a members' ledger for a fraternal organization.

MEMBERS' LEDGER

Name James Moulton Monthly Dues $2.50

Address 3190 Butler St. No. 2672

19__ Quarter	Date Paid	Total		Dues		Fines		Assessments	
1st	Jan. 2	$ 3	00	$ 2	50			$	50
2nd	Apr. 3	2	50	2	50				
3rd	July 15	4	50	2	50	$ 1	00	1	00
4th	Oct. 4	2	50	2	50				

ILLUSTRATION 102

Patients' Subsidiary Ledger.—Hospitals, sanitariums, and charitable institutions that make a nominal charge for services rendered, make use of both bookkeeping machine accounts and hand-kept ledgers for their patients. A patients' ledger record for a hospital is shown in Illustration 103.

Patients' Subsidiary Ledger for Professional Men.—Physicians, surgeons, and dentists are required to keep subsidiary records for their patients. A form of a patients' ledger account is shown in Illustration 104.

Clients' Subsidiary Ledger.—Professional men, such as accountants, attorneys, and engineers keep a record of their clients' accounts when there are a sufficient number of clients to warrant this. Illustration 105 shows such an account.

PATIENTS' LEDGER FORM (Institutions)

Name Mr. Nathan Bordeaux Age 27

Address 4141 Bronx Ave. Color White

Home Telephone No. Bronx 2500 Admitted March 10 19

Doctor Brown Discharged March 12 19

Date	Services	Charges		Credits		Balance	
Mar. 10, 19__	Operating Room	$15	00			$15	00
10	Room	5	00			20	00
11	Laboratory	3	00			23	00
11	Room	5	00			28	00
12	Cash			$28	00	00	00

ILLUSTRATION 103

PATIENTS' LEDGER FOR PROFESSIONAL MEN

Name Mrs. J. C. Tazwell

Address 9201 Knox Ave. Telephone Knox 2100

Date	Services	Charges		Credits		Balance	
April 16	House Call	$4	00			$4	00
17	House Call	4	00			8	00
June 5	Cash			$8	00	0	00

ILLUSTRATION 104

CLIENTS' LEDGER

Name Drake Manufacturing Company

Address 16th and Lincoln Sts.

Telephone Penmore 7700

Date	Services	Charges		Credits		Balance	
Jan. 16	Consultation	$ 50	00	$100	00	Cr. $ 50	00
Feb. 17	Trial	150	00			100	00
Mar. 1	Cash			100	00	000	00

ILLUSTRATION 105

Appropriation Subsidiary Ledger.—In state, county, and city governments, when budgets are employed to control appropriations to various departments and spending agencies, the appropriation ledger is a valuable record. The appropriation ledger, controlled by a general ledger control account, shows the data portrayed in Illustration 106.

APPROPRIATION LEDGER

Name of Department Water

Head of Department H. Carrick

Location of Department Hays Reservoir

Budget Appropriation for Period Mar. 1 19 to Feb. 28 19 $25,000

Date	Estimated Expenditures			Actual Expenditures			Unexpended Balance	
	Purchase Order No.	Estimated Cost		Voucher Number	Actual Cost			
Mar. 3	200	$500	00	T744	$600	00	$24,400	00

ILLUSTRATION 106

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) What factors must be kept in mind with respect to the use of ledgers, when designing an accounting system?

(2) What should be the order of the arrangement of the accounts in the following subsidiary ledgers:

(*a*) Accounts receivable?
(*b*) Stores inventory?
(*c*) Equipment ledger?
(*d*) Capital stock ledger?
(*e*) Factory ledger?

(3) From what journals are postings made to the following:

(*a*) Accounts receivable ledger?
(*b*) Equipment ledger?
(*c*) Expense ledger?

(4) Make drawings to illustrate a ledger form for use in connection with each of the following:

(*a*) Depositor.
(*b*) Tenant.
(*c*) Hotel guest.
(*d*) Club member.
(*e*) Hospital patient.
(*f*) Lawyer's client.

Look over your answers to the questions following Chapters IX, X, XI, and immediately send them for correction. Continue with the study of the next chapter.

CHAPTER XII

INSTALLING THE ACCOUNTING SYSTEM

129. System Installation.—The installation of an accounting system consists of placing into use the various original records, journals, and ledgers, which have been designed from the information collected in the preliminary study. It also includes the explanation of the working of the system to the persons who will be responsible for its operation. A clear and complete outline of the duties and responsibilities of each individual connected with the working of the system should be prepared and transmitted to him either verbally or in writing. The employes of the enterprise must also be made acquainted with the interrelationships existing between the various parts and functions of the system. The details of the preliminary study and other facts necessary for the building of complete accounting systems have been described in the foregoing chapters, but for convenience a brief summary of the steps employed will now be made.

130. The Preliminary Study.—The preliminary study of an enterprise, for the purpose of designing an accounting system, is to obtain the detailed information required. The pertinent details brought to light by such a study include: whether or not the concern is a member of a trade association; the type of the business organization; the amount of capital investment; the amount of the bonded indebtedness; the number of divisions and departments in the enterprise; the personnel of the business; the wishes and desires of the company's officers and executives relative to the system; the nature of the departmental transactions; the need for and the type of various controls and internal checks; and the need for mechanical appliances.

The result of the preliminary study is generally a mass of detailed information which must be unravelled and reknit into a well organized plan which constitutes the accounting system. System designing and installation seem to defy the old saying that: "There is nothing new under the sun." There always seems to be some condition present in each concern that requires a different mode of handling. Whatever the findings of the preliminary study are, they must be coordinated into the system.

131. Coordinating the Findings of the Preliminary Study.—The ability to sort the unimportant details from the important information pertinent to the designing of a system is probably the chief factor that determines the success or failure of a person engaged in system building. It is true that the designing of the system is likewise important, but the development of the system becomes a routine matter which can be mastered by practice. The ability to obtain a mental picture from a study of the enterprise of its problems and important needs, to sense the exact

situation, to assimilate the details, and to mould therefrom the proper type of a system, determines whether or not one is a proficient system man.

The individual who aspires to be a system designer must first of all have innate ability in this field. Second, he should be a student of various business subjects, such as business law, finance, industrial management, marketing, statistics, etc., and also have a knowledge of the general field of economics. In the third place, he should have an intimate knowledge of the general theories of accounting, and be thoroughly familiar with the special fields of the subject. Fourth, he must draw upon the information which is presented in the preceding chapters of this text and comprehend the factors that must be studied, collected, utilized, and combined into what is believed to be a workable accounting system for the particular enterprise. In general, this is the background or the foundation necessary for the man who will coordinate the findings of the preliminary study into a workable accounting system prior to its installation.

The data gathered during the preliminary study are used to outline the system in general; to work out the internal checks; to decide upon the mechanical appliances to be used; to devise the accounting departmentalization; to design the original records; to ascertain the accounts required; to select and label the column headings in the books of original entry; to set up the accounts in the books of secondary entry; and to write a manual of the accounting system, outlining the various phases of its operation.

132. Procedure After Completion of the Original Draft of the System.—The designing of an accounting system is described in detail in Chapters I to XI inclusive. Let it be assumed that a system has been designed in accordance with the information contained in the chapters mentioned. What is the next step? Theoretically, if the necessary time is available, a series of transactions should be worked out to test the practicability of the system. The designer should have the system developed to the point where he has completed forms of the original records, journals, ledgers, a chart of accounts, outlines or charts of internal checks, and charts of the accounting departmentalization. The questionnaire used in making the preliminary survey will show the variety of business transactions that must be recorded during the month. Samples of these transactions should be entered upon copies of the original records. From the original records, the entries should be prepared on sample journal sheets. The postings should then be made to the accounts that will be set up in the general ledger and various subsidiary ledgers. These accounts can be set up conveniently upon work-sheet analysis paper.

This procedure, of working out a series of test transactions, will demonstrate the adequacy of the system in a superficial manner. Certain weaknesses will often be disclosed in this way. Inconsistencies in the routine collecting of data, preparation of entries, and posting will be ascertained. Gaps in the collection of the data on original records can be uncovered. The need for an additional journal or the elimination of one previously thought to be needed will be disclosed. The necessity

for additional general ledger accounts, or for more control accounts, or for a change in the subsidiary accounts can be learned by running a series of test transactions on improvised temporary records and books. The efficiency of the internal checks can also be discovered from the test transactions.

After the system has been tested, and possibly revised at certain points, it is sometimes taken to the business enterprise for further review. But this is not a customary procedure. It may be considered a sign of weakness and lack of ability on the part of the system man to discuss his system and ask suggestions regarding it of the company personnel. On the other hand, it may be good policy to do this under certain conditions. These conditions are: when the system is an intricate or complicated one; when the system is for an unusually large enterprise; and when the officers of the company show an exceptional interest in the nature of the accounting system. There are merits in the submission of the original draft of the system to the inspection of the company officials before it is presented in its final form. The company personnel may render valuable criticisms which are purely of a technical nature and essential to the success of the operation of the system after its installation. Their suggestions may be of such a technical nature that they could not be anticipated by the system man because of his unfamiliarity with the particular business.

If the original draft of the system has been submitted to the officials of the enterprise for which it is designed, and there have been constructive criticisms offered, the system designer should again review the system himself. The designer should revise, retest, and reconsider the system from all angles. Even if the original draft of the system has not been submitted to officials of the enterprise, the system man should give it a final review before presenting it to the company as a finished job.

The final review should result in the ferreting out of the inconsistencies and weaknesses of the system. Certain original records may have to be removed because they overlap. Perhaps additional records will have to be designed. New accounts may be inserted or some may be eliminated in the general or subsidiary ledgers. There may be a loophole in some one of the internal checks which must be corrected. The ultimate purpose of the final review is to challenge every phase of the accounting system as it was originally devised and subsequently revised, before preparing the accounting system instructions and writing the system report.

133. The Accounting System Manual.—Information about the accounting system and instructions for its operation are outgrowths of the intensive study made of the enterprise for the purpose of installing the system. The individual who has made the preliminary study and has designed the system is well equipped to prepare an outline of the method of operating it. If the system is simple or the enterprise is small, the instructions as to the operation of the system may be contained in the system designer's report. If the system is involved on account of the nature or size of the business, the instructions for the operation of the system should be contained in an accounting system manual.

The accounting system manual should be prepared for at least four reasons, namely:

(*a*) To acquaint the members of the accounting department with the details of the system when it is installed.

(*b*) To acquaint new parties assigned to the accounting department with the details of their work. This lessens the amount of explanation that otherwise would have to be given by older employes.

(*c*) To provide for the accounting work to be done in a standard fashion in accordance with standard rules, by whoever may be assigned to do the work.

(*d*) To establish a nucleus to which can be added new principles or features as a result of the necessary expansion of the system.

The accounting manual is a helpful means of getting the accounting system properly installed. The information contained in the manual should be typewritten, mimeographed, or printed depending upon the desires of the management and the number of copies required. The manual should be of the loose-leaf binder type. Each binder should contain a number of cardboard separators with indexed tabs. The tabs should display the names of the sections of the manual under which the various instructions are filed.

A complete accounting system manual for an industrial organization should include divisions in which are contained or described:

(*a*) The purpose of the manual, and the manner in which it is to be used.

(*b*) The chart of accounts together with their code numbers. The subsidiary ledger accounts should be segregated from the general ledger accounts, and the control accounts should be clearly specified.

(*c*) The function of each account in the general ledger, and of those that need description which are in the subsidiary ledger groups.

(*d*) The original records, together with explanations of their use.

(*e*) The books of original entry, including sample entries for each book.

(*f*) The books of secondary entry which are peculiar in form.

(*g*) The method of operating the internal checks.

(*h*) The procedure of closing the ledger.

(*i*) The preparation of the accounting statements and statistical reports.

134. Writing the Accounting System Report.—The nature of the system report made by the system designer for the officials of the business enterprise depends upon whether or not a system manual has been prepared. Where it is not deemed wise to prepare a manual, the system report should contain the neces-

sary instructions for operating the system. The system report, under these circumstances, should outline the nature of the system and the methods of operating it.

The information to be emphasized is: the nature and purpose of the original records; the departments wherein the data are collected and entered upon the original record forms; the outline of the journals to be used, with the column headings of each and the debit and credit significance of each of the columns; a chart of general ledger accounts and code numbers; the names of the control accounts and subsidiary ledgers, together with their respective code numbers and accounts; a description of the internal checks within the departments, and the accounts, books, and individuals affected by each check; the mechanical equipment needed; and the statements and reports to be prepared.

Where a manual is prepared, the system report should dwell upon the unusual situations encountered in the preliminary study, the economies that will result from improved machine methods, the internal checks, and the value and use of statements and reports. The system report should summarize all of the pertinent facts involved in the operation of the system which are vital to its maintenance and successful operation and are not contained in the accounting system manual.

135. Principles to be Followed in Installing an Accounting System.—The person who has designed the accounting system is usually the one assigned to supervise its installation. He orders the original records or requests them to be ordered by the officials of the company wherein the system is being installed. He orders the books of original entry and enters the column headings therein, unless the journal forms are specially printed and contain the headings. He also obtains the general ledger and writes in the names and code numbers of the accounts. Subsidiary ledgers must also be made ready for use by entering the account names and code numbers.

The system man will become acquainted with the employes of the concern who are to be assigned to handle certain phases of the accounting work, and will explain to them their duties in regard to collecting information on each of the original records, preparing journal entries, and making postings. The employes should be made to understand their responsibilities, as well as the effect of their work on other departments, particularly on the preparation of accounting statements and statistical reports and the proving of control accounts.

Where new mechanical appliances are a part of the accounting system, they should be ordered by the management of the enterprise, and be on hand available for use on the date set for putting the system in operation. Agents of the various mechanical equipment companies will spend some time in acquainting the company employes with the method of operating the appliances.

The management will determine who the specific parties are that will be made responsible for operating the various phases of the internal checks. To these parties will be given detailed instructions as to their responsibilities and how they are to prepare records and reports that will establish the internal auditing features.

The system man may work with the company representatives in reallocating old departments or divisions, or in establishing new departments and divisions.

There must be an explanation prepared of the accounting control designed for the new divisionalization or departmentalization.

The basic principles to be followed in the installation of a system are enumerated in this section, but there are three other features pertaining to the installation and operation of the system which must be mentioned. While the three additional features must be reckoned with and provision made for incorporating them within the system, they are an aftermath of the operation of the system. This is why they are described last.

The three features of the accounting system resulting from its operation are:

(*a*) The bookkeeping practice incorporated in the system.

(*b*) The accounting practice related to the system.

(*c*) The statistical reports prepared from data compiled from the system.

Each of these three features is discussed in a separate chapter.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) How are the facts obtained by the preliminary study made use of in actual system installation?

(2) What is the recommended procedure to be followed after drafting the accounting system, but before placing the system into operation? Why is such a procedure recommended?

(3) State the nature, purposes, and general contents of an accounting system manual.

(4) Describe the nature of an accounting system report.

Retain your answers and continue with the study of the next chapter.

CHAPTER XIII

BOOKKEEPING PRACTICE INCORPORATED IN THE ACCOUNTING SYSTEM

136. Relationship Between Bookkeeping and the Accounting System. Every student of accounting knows that bookkeeping and accounting have much in common. This should not be lost sight of in the designing and installing of an accounting system. The principles of bookkeeping were developed long before accounting, as a science, was created, and accounting in its modern aspects is based upon the principles of bookkeeping. The successful operation of an accounting system results from following the rules of bookkeeping. One should not obtain the idea that good bookkeeping depends chiefly upon excellent handwriting and perfect account rulings, as some teachers and textbooks would have us think. Where books are not kept by machines, good handwriting and neat rulings are important, but too much emphasis is often placed on these two factors at the expense of more important principles. Fine writing and ruling are secondary. There are rules and principles of a primary nature, which must be clearly understood by the man engaged in designing and installing the accounting system. He must also be able, if necessary, to explain bookkeeping principles to the individuals employed in the bookkeeping department of the firm in which the system is being installed. The successful operation of the accounting system depends on the bookkeepers' knowledge of bookkeeping principles and practice. What are the bookkeeping principles, then, that have such an important relationship to accounting? These principles which are commented upon at length further on in this chapter, are:

(*a*) The principle of debit and credit equality.
(*b*) The preparation of journal entries.
(*c*) The making of postings to ledger accounts.
(*d*) The summarizing of the ledger accounts.

Some may not agree that these are the only basic principles of bookkeeping. Often there is controversy as to where bookkeeping work ceases, and where accounting work begins. It is difficult to draw a clear-cut line of demarcation between the two subjects in actual practice, because the fundamental rules of bookkeeping are included in the fundamental rules of accounting.

The line of distinction between the two subjects is a relative one. In a small enterprise, the system man may designate the bookkeeping work to be performed by a person who is termed an accountant. This may be done because the appointed person is familiar with the principles of accounting, which implies a knowledge of bookkeeping on his part, and his position includes the preparation of account-

ing statements and reports. In another small concern, the system installation man may designate the person handling the entries and postings as the bookkeeper. The bookkeeper's limited knowledge of the theory and principles of accounting may preclude him from being classified as an accountant, yet he may prepare accounting statements of a simple nature. The individuals termed the bookkeeper in one case and the accountant in the other instance may perform work of an almost identical nature.

In a large business organization, the distinction between the field of bookkeeping and the field of accounting is more definite. Certain well-defined duties can be segregated by the system man and classified as bookkeeping operations, while other functions which are purely of an accounting nature can be so termed. It is in a large business that the relationship between bookkeeping and the accounting system can be shown to best advantage.

137. The Principle of Debit and Credit Equality.—The principle of debit and credit equality is the very heart of the accounting system, even though it is frequently thought of as being related primarily to bookkeeping practice. The system designer must have this principle constantly in mind when he is designing the system. From the designing of the original records to the preparation of the accounting statements, the equality of debit and credit plays a vital part. Without debit and credit equality, there could be no double entry system of bookkeeping with all of its attendant advantages in the preparation of accounting statements. The importance of the bookkeeping principle of equality is shown by the following enumeration of the phases of the accounting system in which this principle is found to be present. It is present in:

(*a*) The analysis of each business transaction.
(*b*) The entries made in each of the books of original entry.
(*c*) The posting of the entries from the journals to the ledgers.
(*d*) The preparation of the trial balance.
(*e*) The completion of the work sheet.
(*f*) The preparation of the accounting statements.

The accounting system, which handles the business transaction from its creation to its final reflection in the statements, is based upon the principle of debit and credit equality. Without it, there is no accounting system except single entry. Single entry can not properly be classed as a system, however, because it does not result in a standard method or procedure of recording all transactions.

138. Preparation of Journal Entries.—There are two things involved in the preparation of every journal entry. First, there is the existence of the double entry equality principle. Second, there is the existence of some original record. The preparation of original records strictly speaking is not a bookkeeping function, but it is the basis for the preparation of all journal entries, which is a bookkeeping function. In designing an accounting system, provision for the preparation of journal entries is preceded by the designing of the original records. The original records

are not drawn up in debit and credit equality form, yet from the information entered thereon entries are made that conform with the equality principle. For example, a charge sales ticket lists the name of the customer and the amount of the sale. From this information an entry is made in the sales journal debiting the customer, and crediting the Sales account. The original records, therefore, must be so designed as to give the information from which a journal entry can be made.

In designing an accounting system, the designer should keep in mind the necessity for the preparation of as few individual or current entries as possible, and for the preparation of as many summary entries as can be made conveniently. The nature of the transactions has much to do with this feature of the accounting system. For example, a large number of daily cash receipts from customers means many daily entries in the cash receipts journal. There are many instances, however, where the original record can be designed in such a manner that the data are collected in weekly or monthly summaries from which single journal entries are prepared at the end of the week or month. An example of a time-saver of this nature is the use of an original record upon which is entered the quantity of raw-material ingredients placed into production each day. At the end of the month, the addition of the ingredient columns gives the totals which are multiplied by the unit cost prices. The resulting products are the figures used in preparing a monthly summary journal entry.

The preparation of journal entries, while primarily the function of the bookkeeper, is not monopolized by him. The accountant is also called upon to prepare certain types of journal entries. In a large enterprise, where there is a clear-cut division between the bookkeeping department and the accounting department, certain definitely assigned duties are given each group. To the bookkeeping department, usually, is assigned the work of preparing entries for the following:

(*a*) Vouchers entered in the voucher register.
(*b*) Voucher checks entered in the check register.
(*c*) Charge sales invoices entered in the sales journal.
(*d*) Cash receipts records entered in the cash receipts journals.
(*e*) Credit memorandums and debit memorandums for returned merchandise, and the receipt and issuance of notes entered in special journals or the general journal.

To the accounting department often is assigned the responsibility for preparing the journal entries that are the result of unusual transactions. These include such items as correcting entries, monthly adjusting entries, interdepartmental transfer entries, and closing entries. Here, again, there can be no uniform method laid down. The size, nature, and personnel of the business enterprise are the determining factors in each individual instance.

139. The Posting Process.—The making of postings, like the preparing of journal entries, is primarily a bookkeeping process. Posting is the outgrowth of journal entries. Posting must adhere to the same fundamental principle of debit and

credit equality if the accounting system is to function smoothly. In designing the accounting system, the original records must be made to tie in with the journals in which the information is entered from the records. The journals must be arranged in columns to conform with the debit and credit equality scheme. With the proper entries made from the original records in properly designed journals, the postings will be correctly made if the bookkeeper is thoroughly familiar with the principles of bookkeeping. The acid test of a good bookkeeper should be his or her knowledge of accurate posting. Before leaving a newly installed accounting system, the system man should be certain that the bookkeeper possesses the required knowledge. This means the knowledge of obtaining debit and credit equality by carrying the exact figures from the journals to the correct sides of the proper accounts.

Where postings are made to ledger accounts by bookkeeping machines, there are certain mechanical principles to be followed in making the debit and credit postings. This is a big step toward obtaining accuracy in bookkeeping, but it is one step removed from perfection. The mechanical application can be only as perfect as the intelligence and knowledge of the machine operator. It is claimed by some that a bookkeeping machine operator need not be a trained bookkeeper. The lack of training in bookkeeping theory and practice often causes the operator to enter debits as credits and vice versa. Such a procedure will prevent subsidiary records from balancing with the control accounts, or will result in an unbalanced general ledger.

140. Summarizing the Ledger Accounts.—The final bookkeeping procedure utilized in the accounting system is the preparing of the general ledger trial balance and proving the control accounts. This work is generally classified as a bookkeeping procedure, because it is a summary and proof of all the bookkeeping procedure up to this point. The trial balance is a summary of all the business transactions in condensed account balance form. A balanced trial balance is fairly adequate proof that the bookkeeping operations have been accurately handled in accordance with the proper principles. Each control account is proved by running an adding machine tape of the balances in the subsidiary record bearing the same name as the control account.

Preparing the trial balance of the general ledger and proving the control accounts are bookkeeping procedures that have a very definite relationship to the accounting system. In fact it may be said that these procedures are the transition steps from bookkeeping to accounting work. The reason is that the accountant makes use of the trial balance and subsidiary ledger proof figures compiled by the bookkeeper to prepare accounting statements and statistical reports. A survey of accounting statements and statistical reports is given in the next two chapters.

141. Effect of Internal Checks on Bookkeeping Activities.—At several points in preceding chapters the statement has been made that the parties assigned to the operation of internal checks should be informed of their responsibility. The bookkeeper is usually involved in the operation of most of the internal checks in an accounting system, especially those internal checks wherein control accounts

play a part. If the bookkeeper is acquainted with his responsibility, he can strive for greater accuracy in operating the control accounts and other phases of the internal checks based upon accumulated figures. Some persons maintain that company employes should be kept in ignorance of the fact that the results of their work automatically check the results of the work of some other individuals, thereby establishing internal checks. The argument for this is that knowledge on the part of certain individuals that they are parties to certain proofs or internal checks may lead them to cooperate to cheat the company. This belief is tenable, but is not a severe indictment of the practice of giving information to individuals. Knowledge of a responsibility usually creates greater effort toward meeting the responsibility.

142. Use of Accounting System Manual in Bookkeeping Practice.—When an accounting system manual has been prepared for use in a business enterprise, there can be no better use of the company's time than to assign each bookkeeper one hour a day for its study until he is familiar with its contents as it relates to his work. The sections of the manual which should be studied by each bookkeeper are those that describe the phases of bookkeeping practice related to the work of the particular individual. In general, these sections are:

(*a*) The chart of accounts.
(*b*) The functions of accounts.
(*c*) The control accounts.
(*d*) The description of the books of original entry.
(*e*) The general ledger accounts.
(*f*) The subsidiary ledger accounts.

Any subsequent changes or revisions made in the accounting system, affecting the bookkeeping procedure, should be brought promptly to the attention of the bookkeepers.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) What are the fundamental principles of bookkeeping that relate to the operation of an accounting system?

(2) (*a*) What is the relationship between the preparation of journal entries for any given system and the designing of the accounting system?

(*b*) What is the relationship between the procedure of summarizing the ledger accounts and the designing of an accounting system?

Retain your answers and continue with the study of the next chapter.

CHAPTER XIV

ACCOUNTING PRACTICE RELATED TO THE ACCOUNTING SYSTEM

143. The Accounting System.—In designing an accounting system, the designer must constantly have in mind the ultimate purpose of the system. The accounting system for any business concern is accepted as a necessary expense and cost of operation merely because it furnishes information of value to the management. This is the ultimate purpose of the system. An accounting system must never be considered as an end in itself; it is merely a means to an end. An accounting system imperfectly designed may result in one of the following conditions or a combination of them. The principal results of an imperfectly designed system are:

(*a*) The reports may be inadequate from the viewpoint of their contents.

(*b*) Reports and statements may be completed at a date so long after the transactions have occurred, that they are of little or no value.

(*c*) The expense of operating the system may be excessive in relation to the size of the enterprise or the nature of the data presented.

The designer of an accounting system must possess a sense of values and perspective that enables him to design the type of an accounting system required for any given enterprise. He must be sure that the system collects the details in a simple fashion without overlapping or unnecessary effort. He must be certain that the statements and reports prepared furnish the data required to give the executives of the enterprise the necessary information for the proper control, in time for effective use. He must be certain that the system is economical in its operation. In other words, the system must be designed to give the maximum of necessary information at a minimum of expense. Such a system must, of course, conform with the best practices of the trade or industry and with the best principles of accounting.

After the accounting system has been designed in keeping with the best principles of system development, its operation is the next thing to consider. The operation of an accounting system is the application of the principles of accounting theory to the collecting, recording, compiling and presenting of the data arising from the business transactions. This procedure is generally termed accounting practice.

144. Accounting Practice Related to the Accounting System.—The principles of accounting practice are innumerable and the nature of the individual business must determine which of these principles is given consideration in the designing

of an accounting system for the enterprise. Thus an accounting system for a manufacturing enterprise will differ, in many respects, from a system designed for a joint venture organization or for an incorporated city. The accounting principles peculiar to certain types of business concerns must be considered and provided for when systems for these concerns are developed.

There are, however, certain theoretical accounting principles that are common to the accounting practice of many different types of enterprises, but which are different in their adaptation. A few of these principles reflected in the accounting practice of many enterprises are:

(*a*) Merchandise discounts.
(*b*) Adjustments (e. g. accruals, prepayments, depreciation, and bad debts).
(*c*) Closing the ledger.
(*d*) Bank reconcilement.
(*e*) Preparing a monthly work sheet.
(*f*) Preparing the monthly statements and reports.

In every instance where a common accounting practice is to be performed in the business enterprise, the system designer must ascertain the peculiarities that exist within the enterprise which affect this practice. He must then construct the system in accordance with the peculiarities found to be present in the enterprise.

(*a*) Though merchandise discounts are common to most enterprises, there is no uniform method of accounting for them. The manner in which the management wishes merchandise discounts handled should receive the attention of the system man during his preliminary study. Whether or not purchases discounts will be taken promptly will determine whether the purchases discount column will be placed in the voucher register or in the check register. Also, the management's wishes as to whether purchases discounts are to be treated as a reduction in the cost of purchases or as other income will affect the form of the profit and loss statement prescribed. Whether sales discounts are treated as a deduction from gross sales or as other income deductions is another point which affects the form of the profit and loss statement to be used.

(*b*) Accrued expense and accrued income items are adjustments common to most business concerns. The nature of the particular accrued items, however, determines the particular accrual accounts to be placed in the chart of accounts and the general ledger. Likewise, the nature of the items determines the prepaid expense and prepaid income accounts provided for in the chart of accounts and the general ledger.

Depreciation and depreciation reserve accounts for various tangible fixed assets are common in many business concerns, and the system designer is often requested to recommend the method to be used in calculating the monthly depreciation charge.

Bad debts may be classified under the heading of selling expense, administrative expense, or other income charges. The nature of the departmental organization and the desire of the management are factors which the system man must consider in locating the Bad Debt account in the ledger and in the profit and loss statement.

(*c*) The process of closing the ledger is common to all accounting systems. Different situations in different business enterprises will enable the system man to provide for the particular method best fitted to a particular concern. The process of closing the ledger in a manufacturing concern using revenue accounts varies to some degree from the closing procedure of a company that does not use revenue accounts. The closing entries for distributing the profits in a partnership type of business differ from the same class of closing entries for a corporation.

(*d*) The policy of reconciling the monthly bank statements, which is a form of an internal check on the cash, is probably the most uniformly applied accounting principle. There are different methods employed to perform this practice, but the differences between them are negligible.

(*e*) The preparation of the monthly work sheet is an accounting procedure which may be said to be the first step in accounting practice. This is the case when there is a clear-cut division existing between the bookkeeping activities of recording and posting transactions and the accounting department activities. The bookkeeping department journalizes and posts the transactions and prepares the monthly trial balance. Upon the completion of the trial balance, the accounting department prepares the work sheet.

In the preparation of a work sheet, it is necessary to incorporate the monthly adjustments. This is an accounting practice that requires a thorough knowledge of accounting theory, hence it lies in the field of the accountant's work. The proper adjustments must be made in the proper manner in order to reflect the accurate profit or loss. The preparation of the monthly statements is predicated upon the completion of the work sheet showing the accurate operating results for the month. From the work sheet, the monthly adjusting entries and the annual closing entries are prepared.

A good conception of the nature of the work sheet can be obtained by considering it as the accountant's summary of the company's transactions for the period for which it is prepared.

145. The Accounting Statements.—Accounting statements are prepared to show the operating results of a business enterprise for a certain period of time and its financial condition on a given date. They are usually prepared from the completed work sheet. It is best to prepare the statements from the work sheet, because the adjustments have been incorporated thereon.

Accounting statements contain condensed summaries of the transactions of the business, as accumulated through the operation of the accounting system. The statements are prepared primarily for the benefit of the owners and executives of the business enterprise. The statements are prepared in regular form and

when interpreted by the executives, serve two principal purposes: first, they reveal the results of operations; second, they serve as a guide for establishing future policies.

Certain regular forms for accounting statements should be drawn up by the system designer. Much thought should be given to the arrangement, in order that frequent revisions will not have to be made with respect to the order of the items. When a statement has once been designed, the order in which the items appear in each statement thereafter should conform with the original pattern. The chief benefit to be gained from uniformity in statement preparation is that comparisons can be easily made between the statements from month to month. The preparation of special comparative statements is facilitated by adopting and maintaining a standard form.

The common practices respecting the preparation of monthly statements and reports differ in accordance with the nature of the concern's operations and the size of the enterprise. For a professional man or for a professional organization, such as a public accounting concern, the monthly statements and reports are simple. For a large industrial concern, the statements and reports are exceedingly varied.

The principal statements prepared from the transactions recorded through the operation of the accounting system are:

(*a*) The manufacturing cost statement (for industrial concerns).
(*b*) The profit and loss statement.
(*c*) The statement of surplus or capital.
(*d*) The balance sheet.

146. Manufacturing Cost Statement.—The purpose of the manufacturing cost statement is to portray the cost of goods produced. This information is generally shown by an analysis of the cost elements, raw materials, direct labor, and manufacturing overhead expenses, together with the work in process inventories at the beginning and end of the period.

The system designer should prepare a form of manufacturing cost statement in accordance with the accounts chosen to record the manufacturing activities. The system manual will specify the use of certain cost accounts. These cost accounts will be kept in the general ledger or the factory ledger as the case may be. There may be subsidiary records in which detailed overhead expense accounts are kept, and from which schedules of overhead expenses may be prepared to accompany the manufacturing cost statement. The accounting system manual or the system designer's report should show an illustration of the form of the manufacturing cost statement.

147. Profit and Loss Statement.—The purpose of the profit and loss statement is to reveal the various factors of income and expense which have resulted in a net profit or a net loss for the period. The form of this statement, for either a manufacturing or a trading concern, follows the outline of the operating accounts

as shown in the chart of accounts in Illustration 7, page 74. The principal divisions of the profit and loss statement are:

(*a*) The operating income (which is the gross sales, less sales returns and allowances).
(*b*) The cost of sales (which is the inventory of finished goods at the beginning of the month plus the cost of production during the month or plus the net purchases of merchandise, from which total is deducted the value of the inventory of finished goods at the end of the month).
(*c*) The gross profit (which is the difference between the net sales and the cost of sales).
(*d*) The selling expenses (which are deducted from the gross profit).
(*e*) The administrative expenses (which are deducted from the gross profit remaining after the selling expenses are deducted).
(*f*) The net operating profit or loss (which is the difference between the gross profit and the combined total of the selling and administrative expenses).
(*g*) The other incomes (which are added to the net operating profit).
(*h*) The other income deductions (which are deducted from the preceding profit).

The expense accounts used to prepare the profit and loss statement will be found in the general ledger or subsidiary ledgers in accordance with the set-up of the accounting system.

The accounting system manual or the system report should show the form of profit and loss statement to be used.

148. Statement of Surplus or Capital.—The statement showing the nature of the changes in the proprietorship that have occurred during a period is the statement of surplus for a corporation, and of capital for sole proprietorships and partnerships. The accounts which have an effect on the Surplus account or owners' Capital accounts should be commented upon in the system manual. The usual accounts affecting owners' Capital accounts are Profit and Loss and the owners' Personal accounts. In the adjustment of the Surplus account, use is made of the Profit and Loss account and other accounts, which need not be commented upon here, but which should be fully described in the system manual or the system report.

149. Balance Sheet.—The form of the balance sheet and its contents will depend upon the accounts required to record the transactions with assets, liabilities, and proprietorship. The preliminary study will reveal the necessary accounts required for the specific business. The figures used in the preparation of a balance sheet come from the general ledger accounts, some of which are control accounts that control subsidiary ledgers, as for example, Accounts Receivable, Inventories, and Equipment.

The accounting manual or the system report will show the form of the balance sheet and the accounts required for its preparation. The order in which the items are used to prepare the balance sheet is usually the same as that shown in the chart of accounts.

150. Additional Statements.—The management of the business may request, or the system man may suggest the use of certain statements in addition to the common ones described in the four preceding articles. There is usually a need for comparative, cumulative, and condensed statements covering various periods of time. Statements showing percentage analyses may be required. The system man can generally sense the need for additional statements of this nature and provide for them in his report or in the manual. Comparative and cumulative statements aid the management in obtaining a better picture of the operating results and financial condition of the business.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) What are the principal evils that result from an imperfectly designed accounting system?

(2) (*a*) What is the connection between the method of handling merchandise discounts and the designing of an accounting system?

(*b*) What relationship exists between monthly adjustments and the designing of an accounting system?

Retain your answers and continue with the study of the next chapter.

CHAPTER XV

STATISTICAL REPORTS PREPARED FROM THE ACCOUNTING SYSTEM

151. Significance of Statistical Reports.—A statistical report is a special presentation of data that cannot be presented in the regular form of an accounting statement. There is a vast amount of information recorded in the various records and books of an accounting system, which has an important bearing upon the operation of the business enterprise; and much of this information is of such a nature that it cannot be shown on the ordinary accounting statements. The executives need this information in order that they may be familiar with the details of the business and be able to exercise proper control. Therefore statistical reports are designed which present the information in such form that it is readily available for use in controlling the business. The nature, use, and value of such reports will now be described in detail.

152. Relationship Between Statistical Reports and the Accounting System. During the process of making the preliminary study for the purpose of designing the accounting system, the need for statistical reports should be borne in mind. The information shown in such reports is as important for the purpose of gleaning an intimate knowledge of the business operations, as is the information shown in the accounting statements. Hence, an accounting system should provide for ways and means of collecting certain data that will be used in the preparation of statistical reports.

The sources of the data used in statistical reports are the business transactions. Most business transactions are first written up on original records, therefore these records should be designed with the idea in mind that a certain amount of the information entered thereon will be utilized in the preparation of statistical reports.

Books of original entry, in some instances, provide the source of information from which statistical reports are prepared. This is particularly true of the sales journal and the sales returns and allowances journal.

153. Distinction Between Original Records and Statistical Reports.—Original records, as the term implies, are the forms on which are collected the business transactions as they occur each day. The original records, when filled in by various employes, furnish the information that is recorded in the journals and ledgers. This information collected and recorded in the original records and books of account is also used to prepare the statistical reports. The reports are generally monthly summaries of transactions that cannot be shown in the regular accounting statements. The reports are prepared chiefly from information relating to the manufacturing and selling divisions, and they cover specific phases of departmental and divisional operating results.

154. Types of Statistical Reports.—Some statistical reports commonly used are mentioned in the following list for the purpose of acquainting the reader with the variety of reports found in use:

(*a*) Prorated Material Cost by Departments.
(*b*) Commodity Raw Material Distribution.
(*c*) Departmental Labor Cost Analysis.
(*d*) Departmental Overhead Expense Distribution.
(*e*) Commodity Overhead Expense Distribution.
(*f*) Cost Element Analysis Statement.
(*g*) Analysis of Cost Elements by Commodities.
(*h*) Production Summary.
(*i*) Departmental Cost Statement.
(*j*) Adjustment of Unabsorbed Overhead Expenses.
(*k*) Sectional Cost Report.
(*l*) Analysis of Off-Capacity Plant Hours.
(*m*) Monthly Report of Idle Time.
(*n*) Cost of Experimental Work.
(*o*) Monthly Sales by Geographical Districts.
(*p*) Monthly Sales by Lines of Commodities.
(*q*) Monthly Cost of Sales by Geographical Districts.
(*r*) Monthly Cost of Sales by Lines of Commodities.
(*s*) Monthly Sales Returns and Allowances by Geographical Districts.
(*t*) Monthly Sales Returns and Allowances by Lines of Commodities.
(*u*) Monthly Sales Quotas and Results by Salesmen.
(*v*) Monthly Analysis of New Customers by Number and Value of Business.
(*w*) Monthly Labor Turnover Report.
(*x*) Monthly Analysis of Advertising Space Purchased.

A form of unit cost sheet, or record of cost of production, which is classified as a statistical report, is shown in Illustration 107.

In addition to the type of reports listed above, there are other classifications of importance. These are accounting statement, statistical report analyses, budget reports, and tax reports.

155. Statistical Report Analyses Prepared from Accounting Statements. Accounting statements serve their purpose very well, but there are limitations in the services rendered by them. For example, a balance sheet mentions nothing about working capital, and this is of vital importance to the successful operation of any business. The figures from which the amount of working capital can be

UNIT COST SHEET, OR RECORD OF COST OF PRODUCTION

	Commodity Group Costs			Departmental Costs					
	Commodities			Departments					
	Total	K	L	Total	M	10	11	12	13
Work In Process Inventory, January 1, 19__:									
Raw Materials	$ 9,800	$ 2,500	$ 4,100	$ 9,800	$ 3,200	$ 4,050	$ 2,660	$ 2,085	$ 1,005
Direct Labor	7,900	2,790	2,350	7,900	2,760	2,590	2,180	1,970	1,160
Overhead Expenses	8,437	3,144	2,933	8,437	2,360	2,849	2,180	2,364	1,044
Total	$ 26,137	$ 8,434	$ 9,383	$ 26,137	$ 8,320	$ 9,489	$ 7,020	$ 6,419	$ 3,209
Charges to Production during January:									
Raw Materials	37,000	8,000	15,990	37,000	13,010	17,500	9,400	5,300	4,800
Direct Labor	45,660	10,130	20,220	45,660	15,310	14,460	14,220	10,480	6,500
Overhead Expenses	48,552	11,272	22,108	48,552	15,172	15,906	14,220	12,576	5,850
Total	$131,212	$29,402	$58,318	$131,212	$43,492	$47,866	$37,840	$28,356	$17,150
Total Charges to Production during January	$157,349	$37,836	$67,701	$157,349	$51,812	$57,355	$44,860	$34,775	$20,359
Work In Process Inventory, January 31, 19__:									
Raw Materials	$ 6,719	3,294	1,551	6,719	1,874	1,969	1,956	1,848	946
Direct Labor	5,205	2,220	1,116	5,205	1,869	1,300	1,205	1,200	1,500
Overhead Expenses	5,425	2,322	1,034	5,425	2,069	1,430	1,205	1,440	1,350
Total	$ 17,349	$ 7,836	$ 3,701	$ 17,349	$ 5,812	$ 4,699	$ 4,366	$ 4,488	$ 3,796
Cost of Production for January 19__	$140,000	$30,000	$64,000	$140,000	$46,000	$52,656	$40,494	$30,287	$16,563
Units Produced		4,450	16,000		8,250				
Unit Cost		$6.7415	$4.00		$5.5757				

ILLUSTRATION 107

computed are available on the balance sheet. But the computation of working capital is a statistical analysis which the system designer should arrange for by means of a monthly or annual report.

There are other similar analyses which should be provided for in the accounting system manual or system report. The most important accounting statement analyses are as follows:

(*a*) The Working Capital and Working Capital Ratio.
(*b*) The Return Earned on Capital Stock.
(*c*) The Turnover of Raw Material Inventories.
(*d*) The Turnover of Work In Process Inventories.
(*e*) The Turnover of Finished Goods or Merchandise Inventories.
(*f*) The Ratio of Net Worth to Debit.
(*g*) The Ratio of Net Sales to Fixed Assets.
(*h*) The Ratio of Cost of Sales to Net Sales.
(*i*) The Ratio of Gross Profit to Net Sales.
(*j*) The Ratio of Selling Expenses to Net Sales.
(*k*) The Ratio of Administrative Expenses to Net Sales.
(*l*) The Ratio of Operating Net Profit to Net Sales.
(*m*) The Ratio of Final Net Profit to Net Sales.

156. Budgets Classified as Statistical Reports.—The operation of a budget in connection with an accounting system illustrates the use of statistical reports. A budget requires the preparation of statistical reports in which are shown the anticipated incomes and expenses for a certain period of time, usually a year, and from which are prepared anticipated financial and operating statements based on the anticipated incomes and expenses. The complete budget embodying all of the divisions of a business for a period of one year is reduced to monthly budgets. These monthly budgets, prepared for different departments of the business, are statistical reports which serve as an effectual means of controlling many expense items. The actual expenses are recorded in the ledgers of the accounting system. At the end of the month, the actual departmental expenses are set up in comparative fashion against the budget figures to disclose the failure to meet or the ability to better the budget figures. The number of such comparative budget reports prepared monthly depends upon the size of the business and its departmentalization.

The installation of a complete budget system is an undertaking of nearly the same magnitude as the installation of an accounting system. There are many principles to be followed in the development and preparation of a budget. The first requisite for the establishment of a budget is a well developed and smoothly functioning accounting system. The budget system can be superimposed on this and operated in conjunction with it. The operation of the budget, however, is through the preparation and use of statistical reports known as budget reports.

157. Tax Returns as Statistical Reports.—The tax reports prepared for any political subdivision of the United States come under the classification of statistical reports. There are both state and Federal income tax reports, which are prepared from the same data used to prepare the financial and operating statements. The chief difference between the tax reports and the accounting statements is the form of presentment. Governmental tax returns are prepared upon prescribed forms furnished by the governments.

Almost all state corporation laws require the preparation of certain reports involving operating results and financial condition of corporations, for tax purposes. There are other forms of tax reports for different local and state governmental divisions and all of these are prepared from the data recorded through the operation of the accounting system.

The designer of any accounting system should know thoroughly the tax requirements affecting the enterprise and should take care that the system includes means of collecting the required tax information. Special accounts or special statistical reports are often necessary to accumulate the required data. The accounting system manual or the system report should contain a section explaining the requirements.

158. Principles of Preparing Statistical Reports.—There are no regular forms to follow in the preparation of statistical reports. The peculiar conditions existing within each business enterprise and the wishes and desires of the executives are factors that must be considered in designing the forms to be used. The chief principles which must be adhered to are conciseness, clarity, and uniformity.

Any statistical report should be as concise as possible, but clarity should not be sacrificed to brevity. The report should contain only the figures necessary to convey the desired information. Long, complex reports usually fail to convey the information intended. If a statistical report is not clear, it fails in its purpose and would better not have been prepared. A good statistical report either carries to the individual for whom it is prepared, the picture of the subject at a glance, or it results in a perfect understanding after brief study. Uniformity in the presentation of statistical reports is desirable and should be emphasized because it permits of monthly comparisons.

159. Methods of Making Statistical Analyses.—Statistical reports are prepared, primarily, from data collected on the original records, in journals, or in ledger accounts. The statistical analyses are made from these sources either by hand or by machine. In a small business enterprise, the analyses may be made by hand compilation. Many large concerns employ various mechanical appliances to summarize the data for report purposes. Tabulating equipment and the use of peg boards are convenient methods of summarizing large quantities of data into concise, clear, uniform reports.

QUESTIONS

Answers to the following questions are now to be prepared by you after careful study of the foregoing chapter. Any good quality paper on which your work will appear neat and legible may be used.

(1) (*a*) Explain the difference between statistical reports and accounting statements.

(*b*) What is the relationship between statistical reports and the designing of an accounting system?

(2) (*a*) State the chief principles to be followed in the preparation of statistical reports.

(*b*) What different methods are employed in the preparation of statistical analyses?

Look over your answers to the questions following Chapters XII, XIII, XIV, XV, and immediately send them for correction.

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